Installation Instructions
Photometry

Nuts

DE-0020-GRI

Table lamp Nuts E27 15W Grey





TECHNICAL FEATURES

IP20

Luminaire total power : 15W

Structure material : Wood

Structure finish : Grey

Diffuser material : Textile

Diffuser finish : Grey

Max. size of light bulb : 140/175 mm

Recommended light bulb : E27

Voltage / frequency : 100-240V ~ 50/60Hz

Warranty : 5 Years

Easily recyclable luminaire

LUMINOTECHNIC FEATURES

Lampholder	Quantity	Light source power (W)	Correlated Colour Temperature (CCT)
E27	1	Max. power 15W	-

LOGISTICS

Net weight (kg): 0.45

Packaged weight (kg): 0.72

Packaging: 192mm x 192mm x 255mm

12 Un

LIGHT APPLICATION



Image may not match reference. LEDS C4 reserves the right to amend any of the product's components. The data related to flux, power and colour temperature are subject to a tolerance of ±10%.

Luminaire
Code DE-0020-GRI
Name NUTS
Measurem.
Code DE-0020-GRI
Name NUTS

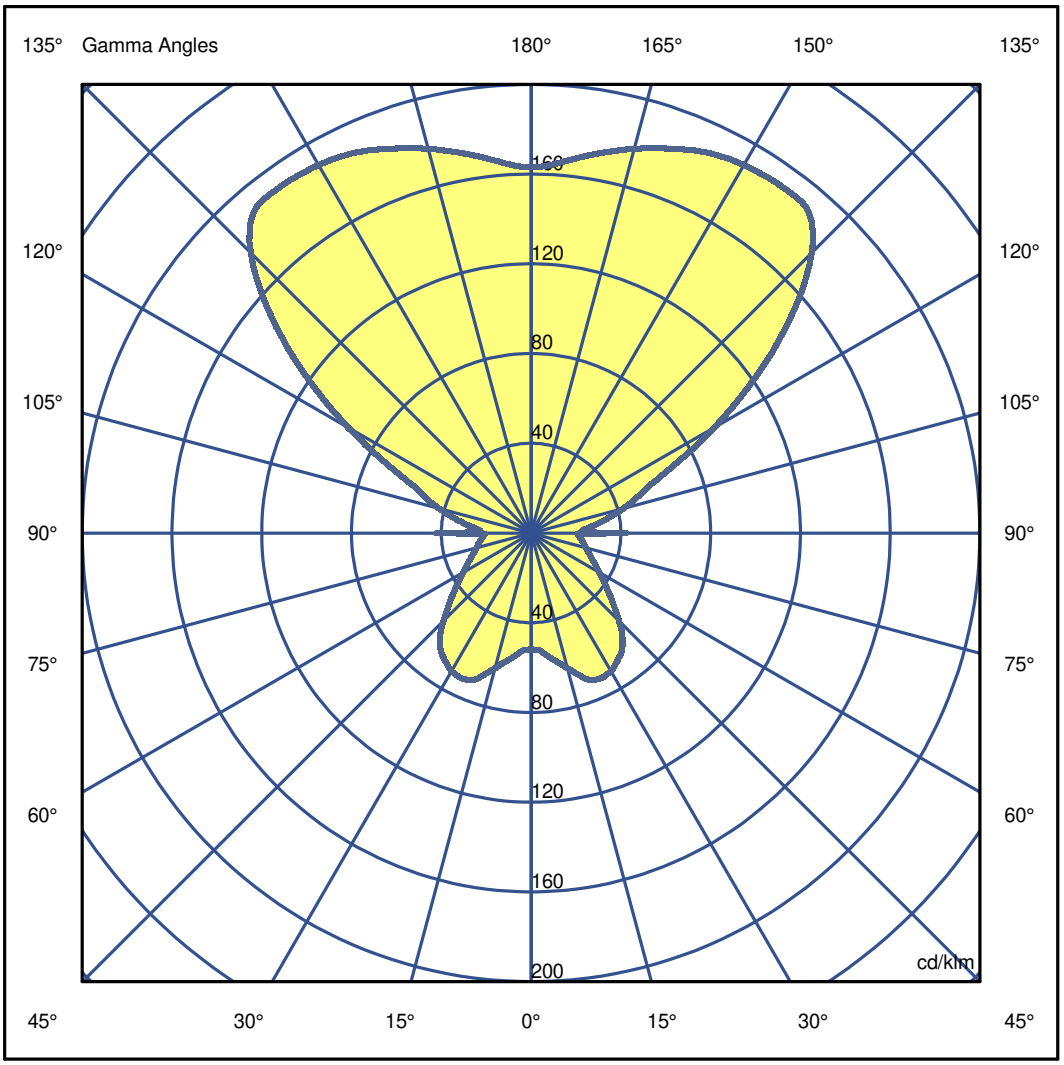
Luminaire Flux	784 lm	Luminaire Power	7.4 W	Efficacy	105.824 lm/W	Efficiency	92.10%
Source Flux	851 lm	Maximum value	190.68 cd/klm	Position	C=0.00 G=143.00	CG	Double Symmetrical

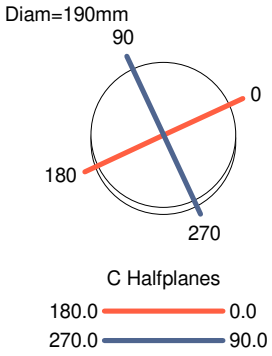
Round Luminaire	Diam. 190 mm	Height	340 mm
Round Luminous Area	Diam. 190 mm	Height	0 mm
Horizontal Luminous Area	0.028353 m2	Emitting area on Plane 180°	0.000000 m2
Emitting area on Plane 0°	0.000000 m2	Emitting area on Plane 270°	0.000000 m2
Emitting area on Plane 90°	0.000000 m2	Glare area at 76°	0.006859 m2
Coordinate system	CG	Symmetry Type	Double Symmetrical
Date	06-06-2024	Maximum Gamma Angle	180
Measurement Distance	0.00	Measurement Flux	851 lm
Operator	qualitat	Rated Voltage	
Temperature		Rated Current	
Humidity		Photocell	
Notes			

Luminaire Sources

Line	Code	Name	Flux [lm]	Pow. [W]	Q.ty
	E-27	-	851.39	7.41	1

C.I.E.	40 68 86 28 92	D DIN 5040	D23
F UTE	0.26 G + 0.66 T	B NBN	BZ 5 / 1.25 / BZ 6





ULOR 66.10 %
DLOR 26.01 %
RN 71.76 %

Luminaire
Code DE-0020-GRI
Name NUTS
Measurem.
Code DE-0020-GRI
Name NUTS

Luminaire Flux	784 lm	Luminaire Power	7.4 W	Efficacy	105.824 lm/W	Efficiency	92.10%
Source Flux	851 lm	Maximum value	190.68 cd/klm	Position	C=0.00 G=143.00	CG	Double Symmetrical

Luminous Intensity Table cd/klm **Table 1/6**

	C 0.00	C 5.00	C 10.00	C 15.00	C 20.00	C 25.00	C 30.00	C 35.00	C 40.00	C 45.00	C 50.00	C 55.00	C 60.00
G 0.0	52.11	52.11	52.11	52.11	52.11	52.11	52.11	52.11	52.11	52.11	52.11	52.11	52.11
G 1.0	51.84	51.84	51.84	51.84	51.84	51.84	51.84	51.84	51.84	51.84	51.84	51.84	51.84
G 2.0	52.12	52.12	52.12	52.12	52.12	52.12	52.12	52.12	52.12	52.12	52.12	52.12	52.12
G 3.0	52.10	52.10	52.10	52.10	52.10	52.10	52.10	52.10	52.10	52.10	52.10	52.10	52.10
G 4.0	52.36	52.36	52.36	52.36	52.36	52.36	52.36	52.36	52.36	52.36	52.36	52.36	52.36
G 5.0	53.08	53.08	53.08	53.08	53.08	53.08	53.08	53.08	53.08	53.08	53.08	53.08	53.08
G 6.0	53.81	53.81	53.81	53.81	53.81	53.81	53.81	53.81	53.81	53.81	53.81	53.81	53.81
G 7.0	54.74	54.74	54.74	54.74	54.74	54.74	54.74	54.74	54.74	54.74	54.74	54.74	54.74
G 8.0	55.56	55.56	55.56	55.56	55.56	55.56	55.56	55.56	55.56	55.56	55.56	55.56	55.56
G 9.0	56.54	56.54	56.54	56.54	56.54	56.54	56.54	56.54	56.54	56.54	56.54	56.54	56.54
G 10.0	57.29	57.29	57.29	57.29	57.29	57.29	57.29	57.29	57.29	57.29	57.29	57.29	57.29
G 11.0	58.13	58.13	58.13	58.13	58.13	58.13	58.13	58.13	58.13	58.13	58.13	58.13	58.13
G 12.0	59.08	59.08	59.08	59.08	59.08	59.08	59.08	59.08	59.08	59.08	59.08	59.08	59.08
G 13.0	60.12	60.12	60.12	60.12	60.12	60.12	60.12	60.12	60.12	60.12	60.12	60.12	60.12
G 14.0	61.29	61.29	61.29	61.29	61.29	61.29	61.29	61.29	61.29	61.29	61.29	61.29	61.29
G 15.0	62.29	62.29	62.29	62.29	62.29	62.29	62.29	62.29	62.29	62.29	62.29	62.29	62.29
G 16.0	63.40	63.40	63.40	63.40	63.40	63.40	63.40	63.40	63.40	63.40	63.40	63.40	63.40
G 17.0	64.56	64.56	64.56	64.56	64.56	64.56	64.56	64.56	64.56	64.56	64.56	64.56	64.56
G 18.0	66.01	66.01	66.01	66.01	66.01	66.01	66.01	66.01	66.01	66.01	66.01	66.01	66.01
G 19.0	67.39	67.39	67.39	67.39	67.39	67.39	67.39	67.39	67.39	67.39	67.39	67.39	67.39
G 20.0	68.77	68.77	68.77	68.77	68.77	68.77	68.77	68.77	68.77	68.77	68.77	68.77	68.77
G 21.0	69.88	69.88	69.88	69.88	69.88	69.88	69.88	69.88	69.88	69.88	69.88	69.88	69.88
G 22.0	70.63	70.63	70.63	70.63	70.63	70.63	70.63	70.63	70.63	70.63	70.63	70.63	70.63
G 23.0	71.16	71.16	71.16	71.16	71.16	71.16	71.16	71.16	71.16	71.16	71.16	71.16	71.16
G 24.0	71.43	71.43	71.43	71.43	71.43	71.43	71.43	71.43	71.43	71.43	71.43	71.43	71.43
G 25.0	71.70	71.70	71.70	71.70	71.70	71.70	71.70	71.70	71.70	71.70	71.70	71.70	71.70
G 26.0	71.78	71.78	71.78	71.78	71.78	71.78	71.78	71.78	71.78	71.78	71.78	71.78	71.78
G 27.0	71.75	71.75	71.75	71.75	71.75	71.75	71.75	71.75	71.75	71.75	71.75	71.75	71.75
G 28.0	71.53	71.53	71.53	71.53	71.53	71.53	71.53	71.53	71.53	71.53	71.53	71.53	71.53
G 29.0	71.33	71.33	71.33	71.33	71.33	71.33	71.33	71.33	71.33	71.33	71.33	71.33	71.33
G 30.0	71.02	71.02	71.02	71.02	71.02	71.02	71.02	71.02	71.02	71.02	71.02	71.02	71.02
G 31.0	70.58	70.58	70.58	70.58	70.58	70.58	70.58	70.58	70.58	70.58	70.58	70.58	70.58
G 32.0	70.05	70.05	70.05	70.05	70.05	70.05	70.05	70.05	70.05	70.05	70.05	70.05	70.05
G 33.0	69.26	69.26	69.26	69.26	69.26	69.26	69.26	69.26	69.26	69.26	69.26	69.26	69.26
G 34.0	68.63	68.63	68.63	68.63	68.63	68.63	68.63	68.63	68.63	68.63	68.63	68.63	68.63
G 35.0	67.99	67.99	67.99	67.99	67.99	67.99	67.99	67.99	67.99	67.99	67.99	67.99	67.99
G 36.0	67.35	67.35	67.35	67.35	67.35	67.35	67.35	67.35	67.35	67.35	67.35	67.35	67.35
G 37.0	66.61	66.61	66.61	66.61	66.61	66.61	66.61	66.61	66.61	66.61	66.61	66.61	66.61
G 38.0	65.70	65.70	65.70	65.70	65.70	65.70	65.70	65.70	65.70	65.70	65.70	65.70	65.70
G 39.0	64.59	64.59	64.59	64.59	64.59	64.59	64.59	64.59	64.59	64.59	64.59	64.59	64.59
G 40.0	63.35	63.35	63.35	63.35	63.35	63.35	63.35	63.35	63.35	63.35	63.35	63.35	63.35
G 41.0	61.94	61.94	61.94	61.94	61.94	61.94	61.94	61.94	61.94	61.94	61.94	61.94	61.94
G 42.0	60.57	60.57	60.57	60.57	60.57	60.57	60.57	60.57	60.57	60.57	60.57	60.57	60.57
G 43.0	58.88	58.88	58.88	58.88	58.88	58.88	58.88	58.88	58.88	58.88	58.88	58.88	58.88
G 44.0	57.15	57.15	57.15	57.15	57.15	57.15	57.15	57.15	57.15	57.15	57.15	57.15	57.15
G 45.0	55.33	55.33	55.33	55.33	55.33	55.33	55.33	55.33	55.33	55.33	55.33	55.33	55.33
G 46.0	53.57	53.57	53.57	53.57	53.57	53.57	53.57	53.57	53.57	53.57	53.57	53.57	53.57
G 47.0	51.81	51.81	51.81	51.81	51.81	51.81	51.81	51.81	51.81	51.81	51.81	51.81	51.81
G 48.0	50.17	50.17	50.17	50.17	50.17	50.17	50.17	50.17	50.17	50.17	50.17	50.17	50.17
G 49.0	48.56	48.56	48.56	48.56	48.56	48.56	48.56	48.56	48.56	48.56	48.56	48.56	48.56
G 50.0	47.06	47.06	47.06	47.06	47.06	47.06	47.06	47.06	47.06	47.06	47.06	47.06	47.06
G 51.0	45.67	45.67	45.67	45.67	45.67	45.67	45.67	45.67	45.67	45.67	45.67	45.67	45.67
G 52.0	44.22	44.22	44.22	44.22	44.22	44.22	44.22	44.22	44.22	44.22	44.22	44.22	44.22
G 53.0	42.89	42.89	42.89	42.89	42.89	42.89	42.89	42.89	42.89	42.89	42.89	42.89	42.89
G 54.0	41.57	41.57	41.57	41.57	41.57	41.57	41.57	41.57	41.57	41.57	41.57	41.57	41.57
G 55.0	40.33	40.33	40.33	40.33	40.33	40.33	40.33	40.33	40.33	40.33	40.33	40.33	40.33
G 56.0	39.11	39.11	39.11	39.11	39.11	39.11	39.11	39.11	39.11	39.11	39.11	39.11	39.11
G 57.0	37.99	37.99	37.99	37.99	37.99	37.99	37.99	37.99	37.99	37.99	37.99	37.99	37.99
G 58.0	36.90	36.90	36.90	36.90	36.90	36.90	36.90	36.90	36.90	36.90	36.90	36.90	36.90
G 59.0	35.88	35.88	35.88	35.88	35.88	35.88	35.88	35.88	35.88	35.88	35.88	35.88	35.88
G 60.0	34.90	34.90	34.90	34.90	34.90	34.90	34.90	34.90	34.90	34.90	34.90	34.90	34.90
G 61.0	34.00	34.00	34.00	34.00	34.00	34.00	34.00	34.00	34.00	34.00	34.00	34.00	34.00
G 62.0	33.16	33.16	33.16	33.16	33.16	33.16	33.16	33.16	33.16	33.16	33.16	33.16	33.16
G 63.0	32.36	32.36	32.36	32.36	32.36	32.36	32.36	32.36	32.36	32.36	32.36	32.36	32.36
G 64.0	31.63	31.63	31.63	31.63	31.63	31.63	31.63	31.63	31.63	31.63	31.63	31.63	31.63
G 65.0	30.86	30.86	30.86	30.86	30.86	30.86	30.86	30.86	30.86	30.86	30.86	30.86	30.86
G 66.0	30.18	30.18	30.18	30.18	30.18	30.18	30.18	30.18	30.18	30.18	30.18	30.18	30.18
G 67.0	29.51	29.51	29.51	29.51	29.51	29.51	29.51	29.51	29.51	29.51	29.51	29.51	29.51
G 68.0	28.89	28.89	28.89	28.89	28.89	28.89	28.89	28.89	28.89	28.89	28.89	28.89	28.89
G 69.0	28.26	28.26	28.26	28.26	28.26	28.26	28.26	28.26	28.26	28.26	28.26	28.26	28.26
G 70.0	27.66	27.66	27.66	27.66	27.66	27.66	27.66	27.66	27.66	27.66	27.66	27.66	27.66
G 71.0	27.08	27.08	27.08	27.08	27.08	27.08	27.08	27.08	27.08	27.08	27.08	27.08	27.08
G 72.0	26.58	26.58	26.58	26.58	26.58	26.58	26.58	26.58	26.58	26.58	26.58	26.58	26.58

Luminaire
Code DE-0020-GRI
Name NUTS
Measurem.
Code DE-0020-GRI
Name NUTS

Luminaire Flux	784 lm	Luminaire Power	7.4 W	Efficacy	105.824 lm/W	Efficiency	92.10%
Source Flux	851 lm	Maximum value	190.68 cd/klm	Position	C=0.00 G=143.00	CG	Double Symmetrical

Luminous Intensity Table cd/klm **Table 2/6**

	C 65.00	C 70.00	C 75.00	C 80.00	C 85.00	C 90.00
G 0.0	52.11	52.11	52.11	52.11	52.11	52.11
G 1.0	51.84	51.84	51.84	51.84	51.84	51.84
G 2.0	52.12	52.12	52.12	52.12	52.12	52.12
G 3.0	52.10	52.10	52.10	52.10	52.10	52.10
G 4.0	52.36	52.36	52.36	52.36	52.36	52.36
G 5.0	53.08	53.08	53.08	53.08	53.08	53.08
G 6.0	53.81	53.81	53.81	53.81	53.81	53.81
G 7.0	54.74	54.74	54.74	54.74	54.74	54.74
G 8.0	55.56	55.56	55.56	55.56	55.56	55.56
G 9.0	56.54	56.54	56.54	56.54	56.54	56.54
G 10.0	57.29	57.29	57.29	57.29	57.29	57.29
G 11.0	58.13	58.13	58.13	58.13	58.13	58.13
G 12.0	59.08	59.08	59.08	59.08	59.08	59.08
G 13.0	60.12	60.12	60.12	60.12	60.12	60.12
G 14.0	61.29	61.29	61.29	61.29	61.29	61.29
G 15.0	62.29	62.29	62.29	62.29	62.29	62.29
G 16.0	63.40	63.40	63.40	63.40	63.40	63.40
G 17.0	64.56	64.56	64.56	64.56	64.56	64.56
G 18.0	66.01	66.01	66.01	66.01	66.01	66.01
G 19.0	67.39	67.39	67.39	67.39	67.39	67.39
G 20.0	68.77	68.77	68.77	68.77	68.77	68.77
G 21.0	69.88	69.88	69.88	69.88	69.88	69.88
G 22.0	70.63	70.63	70.63	70.63	70.63	70.63
G 23.0	71.16	71.16	71.16	71.16	71.16	71.16
G 24.0	71.43	71.43	71.43	71.43	71.43	71.43
G 25.0	71.70	71.70	71.70	71.70	71.70	71.70
G 26.0	71.78	71.78	71.78	71.78	71.78	71.78
G 27.0	71.75	71.75	71.75	71.75	71.75	71.75
G 28.0	71.53	71.53	71.53	71.53	71.53	71.53
G 29.0	71.33	71.33	71.33	71.33	71.33	71.33
G 30.0	71.02	71.02	71.02	71.02	71.02	71.02
G 31.0	70.58	70.58	70.58	70.58	70.58	70.58
G 32.0	70.05	70.05	70.05	70.05	70.05	70.05
G 33.0	69.26	69.26	69.26	69.26	69.26	69.26
G 34.0	68.63	68.63	68.63	68.63	68.63	68.63
G 35.0	67.99	67.99	67.99	67.99	67.99	67.99
G 36.0	67.35	67.35	67.35	67.35	67.35	67.35
G 37.0	66.61	66.61	66.61	66.61	66.61	66.61
G 38.0	65.70	65.70	65.70	65.70	65.70	65.70
G 39.0	64.59	64.59	64.59	64.59	64.59	64.59
G 40.0	63.35	63.35	63.35	63.35	63.35	63.35
G 41.0	61.94	61.94	61.94	61.94	61.94	61.94
G 42.0	60.57	60.57	60.57	60.57	60.57	60.57
G 43.0	58.88	58.88	58.88	58.88	58.88	58.88
G 44.0	57.15	57.15	57.15	57.15	57.15	57.15
G 45.0	55.33	55.33	55.33	55.33	55.33	55.33
G 46.0	53.57	53.57	53.57	53.57	53.57	53.57
G 47.0	51.81	51.81	51.81	51.81	51.81	51.81
G 48.0	50.17	50.17	50.17	50.17	50.17	50.17
G 49.0	48.56	48.56	48.56	48.56	48.56	48.56
G 50.0	47.06	47.06	47.06	47.06	47.06	47.06
G 51.0	45.67	45.67	45.67	45.67	45.67	45.67
G 52.0	44.22	44.22	44.22	44.22	44.22	44.22
G 53.0	42.89	42.89	42.89	42.89	42.89	42.89
G 54.0	41.57	41.57	41.57	41.57	41.57	41.57
G 55.0	40.33	40.33	40.33	40.33	40.33	40.33
G 56.0	39.11	39.11	39.11	39.11	39.11	39.11
G 57.0	37.99	37.99	37.99	37.99	37.99	37.99
G 58.0	36.90	36.90	36.90	36.90	36.90	36.90
G 59.0	35.88	35.88	35.88	35.88	35.88	35.88
G 60.0	34.90	34.90	34.90	34.90	34.90	34.90
G 61.0	34.00	34.00	34.00	34.00	34.00	34.00
G 62.0	33.16	33.16	33.16	33.16	33.16	33.16
G 63.0	32.36	32.36	32.36	32.36	32.36	32.36
G 64.0	31.63	31.63	31.63	31.63	31.63	31.63
G 65.0	30.86	30.86	30.86	30.86	30.86	30.86
G 66.0	30.18	30.18	30.18	30.18	30.18	30.18
G 67.0	29.51	29.51	29.51	29.51	29.51	29.51
G 68.0	28.89	28.89	28.89	28.89	28.89	28.89
G 69.0	28.26	28.26	28.26	28.26	28.26	28.26
G 70.0	27.66	27.66	27.66	27.66	27.66	27.66
G 71.0	27.08	27.08	27.08	27.08	27.08	27.08
G 72.0	26.58	26.58	26.58	26.58	26.58	26.58

Luminaire
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Measurem.
Code DE-0020-GRI
Name NUTS

Luminaire Flux	784 lm	Luminaire Power	7.4 W	Efficacy	105.824 lm/W	Efficiency	92.10%
Source Flux	851 lm	Maximum value	190.68 cd/klm	Position	C=0.00 G=143.00	CG	Double Symmetrical

Luminous Intensity Table cd/klm **Table 3/6**

	C 0.00	C 5.00	C 10.00	C 15.00	C 20.00	C 25.00	C 30.00	C 35.00	C 40.00	C 45.00	C 50.00	C 55.00	C 60.00
G 73.0	26.11	26.11	26.11	26.11	26.11	26.11	26.11	26.11	26.11	26.11	26.11	26.11	26.11
G 74.0	25.69	25.69	25.69	25.69	25.69	25.69	25.69	25.69	25.69	25.69	25.69	25.69	25.69
G 75.0	25.29	25.29	25.29	25.29	25.29	25.29	25.29	25.29	25.29	25.29	25.29	25.29	25.29
G 76.0	24.87	24.87	24.87	24.87	24.87	24.87	24.87	24.87	24.87	24.87	24.87	24.87	24.87
G 77.0	24.52	24.52	24.52	24.52	24.52	24.52	24.52	24.52	24.52	24.52	24.52	24.52	24.52
G 78.0	24.17	24.17	24.17	24.17	24.17	24.17	24.17	24.17	24.17	24.17	24.17	24.17	24.17
G 79.0	23.84	23.84	23.84	23.84	23.84	23.84	23.84	23.84	23.84	23.84	23.84	23.84	23.84
G 80.0	23.51	23.51	23.51	23.51	23.51	23.51	23.51	23.51	23.51	23.51	23.51	23.51	23.51
G 81.0	23.11	23.11	23.11	23.11	23.11	23.11	23.11	23.11	23.11	23.11	23.11	23.11	23.11
G 82.0	22.73	22.73	22.73	22.73	22.73	22.73	22.73	22.73	22.73	22.73	22.73	22.73	22.73
G 83.0	22.39	22.39	22.39	22.39	22.39	22.39	22.39	22.39	22.39	22.39	22.39	22.39	22.39
G 84.0	22.11	22.11	22.11	22.11	22.11	22.11	22.11	22.11	22.11	22.11	22.11	22.11	22.11
G 85.0	21.82	21.82	21.82	21.82	21.82	21.82	21.82	21.82	21.82	21.82	21.82	21.82	21.82
G 86.0	21.52	21.52	21.52	21.52	21.52	21.52	21.52	21.52	21.52	21.52	21.52	21.52	21.52
G 87.0	21.20	21.20	21.20	21.20	21.20	21.20	21.20	21.20	21.20	21.20	21.20	21.20	21.20
G 88.0	20.87	20.87	20.87	20.87	20.87	20.87	20.87	20.87	20.87	20.87	20.87	20.87	20.87
G 89.0	20.55	20.55	20.55	20.55	20.55	20.55	20.55	20.55	20.55	20.55	20.55	20.55	20.55
G 90.0	42.43	42.43	42.43	42.43	42.43	42.43	42.43	42.43	42.43	42.43	42.43	42.43	42.43
G 91.0	22.24	22.24	22.24	22.24	22.24	22.24	22.24	22.24	22.24	22.24	22.24	22.24	22.24
G 92.0	22.40	22.40	22.40	22.40	22.40	22.40	22.40	22.40	22.40	22.40	22.40	22.40	22.40
G 93.0	22.92	22.92	22.92	22.92	22.92	22.92	22.92	22.92	22.92	22.92	22.92	22.92	22.92
G 94.0	23.84	23.84	23.84	23.84	23.84	23.84	23.84	23.84	23.84	23.84	23.84	23.84	23.84
G 95.0	25.04	25.04	25.04	25.04	25.04	25.04	25.04	25.04	25.04	25.04	25.04	25.04	25.04
G 96.0	26.59	26.59	26.59	26.59	26.59	26.59	26.59	26.59	26.59	26.59	26.59	26.59	26.59
G 97.0	28.18	28.18	28.18	28.18	28.18	28.18	28.18	28.18	28.18	28.18	28.18	28.18	28.18
G 98.0	29.80	29.80	29.80	29.80	29.80	29.80	29.80	29.80	29.80	29.80	29.80	29.80	29.80
G 99.0	31.41	31.41	31.41	31.41	31.41	31.41	31.41	31.41	31.41	31.41	31.41	31.41	31.41
G100.0	33.14	33.14	33.14	33.14	33.14	33.14	33.14	33.14	33.14	33.14	33.14	33.14	33.14
G101.0	34.88	34.88	34.88	34.88	34.88	34.88	34.88	34.88	34.88	34.88	34.88	34.88	34.88
G102.0	36.75	36.75	36.75	36.75	36.75	36.75	36.75	36.75	36.75	36.75	36.75	36.75	36.75
G103.0	38.61	38.61	38.61	38.61	38.61	38.61	38.61	38.61	38.61	38.61	38.61	38.61	38.61
G104.0	40.59	40.59	40.59	40.59	40.59	40.59	40.59	40.59	40.59	40.59	40.59	40.59	40.59
G105.0	42.57	42.57	42.57	42.57	42.57	42.57	42.57	42.57	42.57	42.57	42.57	42.57	42.57
G106.0	44.54	44.54	44.54	44.54	44.54	44.54	44.54	44.54	44.54	44.54	44.54	44.54	44.54
G107.0	46.56	46.56	46.56	46.56	46.56	46.56	46.56	46.56	46.56	46.56	46.56	46.56	46.56
G108.0	48.47	48.47	48.47	48.47	48.47	48.47	48.47	48.47	48.47	48.47	48.47	48.47	48.47
G109.0	50.45	50.45	50.45	50.45	50.45	50.45	50.45	50.45	50.45	50.45	50.45	50.45	50.45
G110.0	52.23	52.23	52.23	52.23	52.23	52.23	52.23	52.23	52.23	52.23	52.23	52.23	52.23
G111.0	54.44	54.44	54.44	54.44	54.44	54.44	54.44	54.44	54.44	54.44	54.44	54.44	54.44
G112.0	56.99	56.99	56.99	56.99	56.99	56.99	56.99	56.99	56.99	56.99	56.99	56.99	56.99
G113.0	60.40	60.40	60.40	60.40	60.40	60.40	60.40	60.40	60.40	60.40	60.40	60.40	60.40
G114.0	64.24	64.24	64.24	64.24	64.24	64.24	64.24	64.24	64.24	64.24	64.24	64.24	64.24
G115.0	68.54	68.54	68.54	68.54	68.54	68.54	68.54	68.54	68.54	68.54	68.54	68.54	68.54
G116.0	73.25	73.25	73.25	73.25	73.25	73.25	73.25	73.25	73.25	73.25	73.25	73.25	73.25
G117.0	78.01	78.01	78.01	78.01	78.01	78.01	78.01	78.01	78.01	78.01	78.01	78.01	78.01
G118.0	83.38	83.38	83.38	83.38	83.38	83.38	83.38	83.38	83.38	83.38	83.38	83.38	83.38
G119.0	88.47	88.47	88.47	88.47	88.47	88.47	88.47	88.47	88.47	88.47	88.47	88.47	88.47
G120.0	94.21	94.21	94.21	94.21	94.21	94.21	94.21	94.21	94.21	94.21	94.21	94.21	94.21
G121.0	99.57	99.57	99.57	99.57	99.57	99.57	99.57	99.57	99.57	99.57	99.57	99.57	99.57
G122.0	105.48	105.48	105.48	105.48	105.48	105.48	105.48	105.48	105.48	105.48	105.48	105.48	105.48
G123.0	111.16	111.16	111.16	111.16	111.16	111.16	111.16	111.16	111.16	111.16	111.16	111.16	111.16
G124.0	117.06	117.06	117.06	117.06	117.06	117.06	117.06	117.06	117.06	117.06	117.06	117.06	117.06
G125.0	123.04	123.04	123.04	123.04	123.04	123.04	123.04	123.04	123.04	123.04	123.04	123.04	123.04
G126.0	128.80	128.80	128.80	128.80	128.80	128.80	128.80	128.80	128.80	128.80	128.80	128.80	128.80
G127.0	134.86	134.86	134.86	134.86	134.86	134.86	134.86	134.86	134.86	134.86	134.86	134.86	134.86
G128.0	140.40	140.40	140.40	140.40	140.40	140.40	140.40	140.40	140.40	140.40	140.40	140.40	140.40
G129.0	146.37	146.37	146.37	146.37	146.37	146.37	146.37	146.37	146.37	146.37	146.37	146.37	146.37
G130.0	151.70	151.70	151.70	151.70	151.70	151.70	151.70	151.70	151.70	151.70	151.70	151.70	151.70
G131.0	157.33	157.33	157.33	157.33	157.33	157.33	157.33	157.33	157.33	157.33	157.33	157.33	157.33
G132.0	162.53	162.53	162.53	162.53	162.53	162.53	162.53	162.53	162.53	162.53	162.53	162.53	162.53
G133.0	167.63	167.63	167.63	167.63	167.63	167.63	167.63	167.63	167.63	167.63	167.63	167.63	167.63
G134.0	172.41	172.41	172.41	172.41	172.41	172.41	172.41	172.41	172.41	172.41	172.41	172.41	172.41
G135.0	176.68	176.68	176.68	176.68	176.68	176.68	176.68	176.68	176.68	176.68	176.68	176.68	176.68
G136.0	180.73	180.73	180.73	180.73	180.73	180.73	180.73	180.73	180.73	180.73	180.73	180.73	180.73
G137.0	183.91	183.91	183.91	183.91	183.91	183.91	183.91	183.91	183.91	183.91	183.91	183.91	183.91
G138.0	186.79	186.79	186.79	186.79	186.79	186.79	186.79	186.79	186.79	186.79	186.79	186.79	186.79
G139.0	188.74	188.74	188.74	188.74	188.74	188.74	188.74	188.74	188.74	188.74	188.74	188.74	188.74
G140.0	190.12	190.12	190.12	190.12	190.12	190.12	190.12	190.12	190.12	190.12	190.12	190.12	190.12
G141.0	190.59	190.59	190.59	190.59	190.59	190.59	190.59	190.59	190.59	190.59	190.59	190.59	190.59
G142.0	190.67	190.67	190.67	190.67	190.67	190.67	190.67	190.67	190.67	190.67	190.67	190.67	190.67
G143.0	190.68	190.68	190.68	190.68	190.68	190.68	190.68	190.68	190.68	190.68	190.68	190.68	190.68
G144.0	190.66	190.66	190.66	190.66	190.66	190.66	190.66	190.66	190.66	190.66	190.66	190.66	190.66
G145.0	190.58	190.58	190.58	190.58	190.58	190.58	190.58	190.58	190.58	190.58	190.58	190.58	190.58

Luminaire
Code DE-0020-GRI
Name NUTS
Measurem.
Code DE-0020-GRI
Name NUTS

Luminaire Flux	784 lm	Luminaire Power	7.4 W	Efficacy	105.824 lm/W	Efficiency	92.10%
Source Flux	851 lm	Maximum value	190.68 cd/klm	Position	C=0.00 G=143.00	CG	Double Symmetrical

Luminous Intensity Table cd/klm **Table 4/6**

	C 65.00	C 70.00	C 75.00	C 80.00	C 85.00	C 90.00
G 73.0	26.11	26.11	26.11	26.11	26.11	26.11
G 74.0	25.69	25.69	25.69	25.69	25.69	25.69
G 75.0	25.29	25.29	25.29	25.29	25.29	25.29
G 76.0	24.87	24.87	24.87	24.87	24.87	24.87
G 77.0	24.52	24.52	24.52	24.52	24.52	24.52
G 78.0	24.17	24.17	24.17	24.17	24.17	24.17
G 79.0	23.84	23.84	23.84	23.84	23.84	23.84
G 80.0	23.51	23.51	23.51	23.51	23.51	23.51
G 81.0	23.11	23.11	23.11	23.11	23.11	23.11
G 82.0	22.73	22.73	22.73	22.73	22.73	22.73
G 83.0	22.39	22.39	22.39	22.39	22.39	22.39
G 84.0	22.11	22.11	22.11	22.11	22.11	22.11
G 85.0	21.82	21.82	21.82	21.82	21.82	21.82
G 86.0	21.52	21.52	21.52	21.52	21.52	21.52
G 87.0	21.20	21.20	21.20	21.20	21.20	21.20
G 88.0	20.87	20.87	20.87	20.87	20.87	20.87
G 89.0	20.55	20.55	20.55	20.55	20.55	20.55
G 90.0	42.43	42.43	42.43	42.43	42.43	42.43
G 91.0	22.24	22.24	22.24	22.24	22.24	22.24
G 92.0	22.40	22.40	22.40	22.40	22.40	22.40
G 93.0	22.92	22.92	22.92	22.92	22.92	22.92
G 94.0	23.84	23.84	23.84	23.84	23.84	23.84
G 95.0	25.04	25.04	25.04	25.04	25.04	25.04
G 96.0	26.59	26.59	26.59	26.59	26.59	26.59
G 97.0	28.18	28.18	28.18	28.18	28.18	28.18
G 98.0	29.80	29.80	29.80	29.80	29.80	29.80
G 99.0	31.41	31.41	31.41	31.41	31.41	31.41
G100.0	33.14	33.14	33.14	33.14	33.14	33.14
G101.0	34.88	34.88	34.88	34.88	34.88	34.88
G102.0	36.75	36.75	36.75	36.75	36.75	36.75
G103.0	38.61	38.61	38.61	38.61	38.61	38.61
G104.0	40.59	40.59	40.59	40.59	40.59	40.59
G105.0	42.57	42.57	42.57	42.57	42.57	42.57
G106.0	44.54	44.54	44.54	44.54	44.54	44.54
G107.0	46.56	46.56	46.56	46.56	46.56	46.56
G108.0	48.47	48.47	48.47	48.47	48.47	48.47
G109.0	50.45	50.45	50.45	50.45	50.45	50.45
G110.0	52.23	52.23	52.23	52.23	52.23	52.23
G111.0	54.44	54.44	54.44	54.44	54.44	54.44
G112.0	56.99	56.99	56.99	56.99	56.99	56.99
G113.0	60.40	60.40	60.40	60.40	60.40	60.40
G114.0	64.24	64.24	64.24	64.24	64.24	64.24
G115.0	68.54	68.54	68.54	68.54	68.54	68.54
G116.0	73.25	73.25	73.25	73.25	73.25	73.25
G117.0	78.01	78.01	78.01	78.01	78.01	78.01
G118.0	83.38	83.38	83.38	83.38	83.38	83.38
G119.0	88.47	88.47	88.47	88.47	88.47	88.47
G120.0	94.21	94.21	94.21	94.21	94.21	94.21
G121.0	99.57	99.57	99.57	99.57	99.57	99.57
G122.0	105.48	105.48	105.48	105.48	105.48	105.48
G123.0	111.16	111.16	111.16	111.16	111.16	111.16
G124.0	117.06	117.06	117.06	117.06	117.06	117.06
G125.0	123.04	123.04	123.04	123.04	123.04	123.04
G126.0	128.80	128.80	128.80	128.80	128.80	128.80
G127.0	134.86	134.86	134.86	134.86	134.86	134.86
G128.0	140.40	140.40	140.40	140.40	140.40	140.40
G129.0	146.37	146.37	146.37	146.37	146.37	146.37
G130.0	151.70	151.70	151.70	151.70	151.70	151.70
G131.0	157.33	157.33	157.33	157.33	157.33	157.33
G132.0	162.53	162.53	162.53	162.53	162.53	162.53
G133.0	167.63	167.63	167.63	167.63	167.63	167.63
G134.0	172.41	172.41	172.41	172.41	172.41	172.41
G135.0	176.68	176.68	176.68	176.68	176.68	176.68
G136.0	180.73	180.73	180.73	180.73	180.73	180.73
G137.0	183.91	183.91	183.91	183.91	183.91	183.91
G138.0	186.79	186.79	186.79	186.79	186.79	186.79
G139.0	188.74	188.74	188.74	188.74	188.74	188.74
G140.0	190.12	190.12	190.12	190.12	190.12	190.12
G141.0	190.59	190.59	190.59	190.59	190.59	190.59
G142.0	190.67	190.67	190.67	190.67	190.67	190.67
G143.0	190.68	190.68	190.68	190.68	190.68	190.68
G144.0	190.66	190.66	190.66	190.66	190.66	190.66
G145.0	190.58	190.58	190.58	190.58	190.58	190.58

Luminaire
Code DE-0020-GRI
Name NUTS
Measurem.
Code DE-0020-GRI
Name NUTS

Luminaire Flux	784 lm	Luminaire Power	7.4 W	Efficacy	105.824 lm/W	Efficiency	92.10%
Source Flux	851 lm	Maximum value	190.68 cd/klm	Position	C=0.00 G=143.00	CG	Double Symmetrical

Luminous Intensity Table cd/klm **Table 5/6**

	C 0.00	C 5.00	C 10.00	C 15.00	C 20.00	C 25.00	C 30.00	C 35.00	C 40.00	C 45.00	C 50.00	C 55.00	C 60.00
G146.0	190.46	190.46	190.46	190.46	190.46	190.46	190.46	190.46	190.46	190.46	190.46	190.46	190.46
G147.0	190.24	190.24	190.24	190.24	190.24	190.24	190.24	190.24	190.24	190.24	190.24	190.24	190.24
G148.0	190.02	190.02	190.02	190.02	190.02	190.02	190.02	190.02	190.02	190.02	190.02	190.02	190.02
G149.0	189.76	189.76	189.76	189.76	189.76	189.76	189.76	189.76	189.76	189.76	189.76	189.76	189.76
G150.0	189.46	189.46	189.46	189.46	189.46	189.46	189.46	189.46	189.46	189.46	189.46	189.46	189.46
G151.0	189.09	189.09	189.09	189.09	189.09	189.09	189.09	189.09	189.09	189.09	189.09	189.09	189.09
G152.0	188.67	188.67	188.67	188.67	188.67	188.67	188.67	188.67	188.67	188.67	188.67	188.67	188.67
G153.0	188.20	188.20	188.20	188.20	188.20	188.20	188.20	188.20	188.20	188.20	188.20	188.20	188.20
G154.0	187.62	187.62	187.62	187.62	187.62	187.62	187.62	187.62	187.62	187.62	187.62	187.62	187.62
G155.0	187.01	187.01	187.01	187.01	187.01	187.01	187.01	187.01	187.01	187.01	187.01	187.01	187.01
G156.0	186.17	186.17	186.17	186.17	186.17	186.17	186.17	186.17	186.17	186.17	186.17	186.17	186.17
G157.0	185.37	185.37	185.37	185.37	185.37	185.37	185.37	185.37	185.37	185.37	185.37	185.37	185.37
G158.0	184.37	184.37	184.37	184.37	184.37	184.37	184.37	184.37	184.37	184.37	184.37	184.37	184.37
G159.0	183.46	183.46	183.46	183.46	183.46	183.46	183.46	183.46	183.46	183.46	183.46	183.46	183.46
G160.0	182.43	182.43	182.43	182.43	182.43	182.43	182.43	182.43	182.43	182.43	182.43	182.43	182.43
G161.0	181.44	181.44	181.44	181.44	181.44	181.44	181.44	181.44	181.44	181.44	181.44	181.44	181.44
G162.0	180.45	180.45	180.45	180.45	180.45	180.45	180.45	180.45	180.45	180.45	180.45	180.45	180.45
G163.0	179.39	179.39	179.39	179.39	179.39	179.39	179.39	179.39	179.39	179.39	179.39	179.39	179.39
G164.0	178.42	178.42	178.42	178.42	178.42	178.42	178.42	178.42	178.42	178.42	178.42	178.42	178.42
G165.0	177.28	177.28	177.28	177.28	177.28	177.28	177.28	177.28	177.28	177.28	177.28	177.28	177.28
G166.0	176.30	176.30	176.30	176.30	176.30	176.30	176.30	176.30	176.30	176.30	176.30	176.30	176.30
G167.0	175.12	175.12	175.12	175.12	175.12	175.12	175.12	175.12	175.12	175.12	175.12	175.12	175.12
G168.0	174.10	174.10	174.10	174.10	174.10	174.10	174.10	174.10	174.10	174.10	174.10	174.10	174.10
G169.0	172.92	172.92	172.92	172.92	172.92	172.92	172.92	172.92	172.92	172.92	172.92	172.92	172.92
G170.0	171.83	171.83	171.83	171.83	171.83	171.83	171.83	171.83	171.83	171.83	171.83	171.83	171.83
G171.0	170.70	170.70	170.70	170.70	170.70	170.70	170.70	170.70	170.70	170.70	170.70	170.70	170.70
G172.0	169.55	169.55	169.55	169.55	169.55	169.55	169.55	169.55	169.55	169.55	169.55	169.55	169.55
G173.0	168.49	168.49	168.49	168.49	168.49	168.49	168.49	168.49	168.49	168.49	168.49	168.49	168.49
G174.0	167.29	167.29	167.29	167.29	167.29	167.29	167.29	167.29	167.29	167.29	167.29	167.29	167.29
G175.0	166.31	166.31	166.31	166.31	166.31	166.31	166.31	166.31	166.31	166.31	166.31	166.31	166.31
G176.0	165.20	165.20	165.20	165.20	165.20	165.20	165.20	165.20	165.20	165.20	165.20	165.20	165.20
G177.0	164.38	164.38	164.38	164.38	164.38	164.38	164.38	164.38	164.38	164.38	164.38	164.38	164.38
G178.0	163.67	163.67	163.67	163.67	163.67	163.67	163.67	163.67	163.67	163.67	163.67	163.67	163.67
G179.0	163.25	163.25	163.25	163.25	163.25	163.25	163.25	163.25	163.25	163.25	163.25	163.25	163.25
G180.0	163.05	163.05	163.05	163.05	163.05	163.05	163.05	163.05	163.05	163.05	163.05	163.05	163.05

Luminaire
Code DE-0020-GRI
Name NUTS
Measurem.
Code DE-0020-GRI
Name NUTS

Luminaire Flux	784 lm	Luminaire Power	7.4 W	Efficacy	105.824 lm/W	Efficiency	92.10%
Source Flux	851 lm	Maximum value	190.68 cd/klm	Position	C=0.00 G=143.00	CG	Double Symmetrical

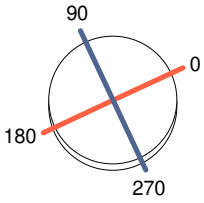
Luminous Intensity Table cd/klm **Table 6/6**

	C 65.00	C 70.00	C 75.00	C 80.00	C 85.00	C 90.00
G146.0	190.46	190.46	190.46	190.46	190.46	190.46
G147.0	190.24	190.24	190.24	190.24	190.24	190.24
G148.0	190.02	190.02	190.02	190.02	190.02	190.02
G149.0	189.76	189.76	189.76	189.76	189.76	189.76
G150.0	189.46	189.46	189.46	189.46	189.46	189.46
G151.0	189.09	189.09	189.09	189.09	189.09	189.09
G152.0	188.67	188.67	188.67	188.67	188.67	188.67
G153.0	188.20	188.20	188.20	188.20	188.20	188.20
G154.0	187.62	187.62	187.62	187.62	187.62	187.62
G155.0	187.01	187.01	187.01	187.01	187.01	187.01
G156.0	186.17	186.17	186.17	186.17	186.17	186.17
G157.0	185.37	185.37	185.37	185.37	185.37	185.37
G158.0	184.37	184.37	184.37	184.37	184.37	184.37
G159.0	183.46	183.46	183.46	183.46	183.46	183.46
G160.0	182.43	182.43	182.43	182.43	182.43	182.43
G161.0	181.44	181.44	181.44	181.44	181.44	181.44
G162.0	180.45	180.45	180.45	180.45	180.45	180.45
G163.0	179.39	179.39	179.39	179.39	179.39	179.39
G164.0	178.42	178.42	178.42	178.42	178.42	178.42
G165.0	177.28	177.28	177.28	177.28	177.28	177.28
G166.0	176.30	176.30	176.30	176.30	176.30	176.30
G167.0	175.12	175.12	175.12	175.12	175.12	175.12
G168.0	174.10	174.10	174.10	174.10	174.10	174.10
G169.0	172.92	172.92	172.92	172.92	172.92	172.92
G170.0	171.83	171.83	171.83	171.83	171.83	171.83
G171.0	170.70	170.70	170.70	170.70	170.70	170.70
G172.0	169.55	169.55	169.55	169.55	169.55	169.55
G173.0	168.49	168.49	168.49	168.49	168.49	168.49
G174.0	167.29	167.29	167.29	167.29	167.29	167.29
G175.0	166.31	166.31	166.31	166.31	166.31	166.31
G176.0	165.20	165.20	165.20	165.20	165.20	165.20
G177.0	164.38	164.38	164.38	164.38	164.38	164.38
G178.0	163.67	163.67	163.67	163.67	163.67	163.67
G179.0	163.25	163.25	163.25	163.25	163.25	163.25
G180.0	163.05	163.05	163.05	163.05	163.05	163.05

Luminaire
Code DE-0020-GRI
Name NUTS
Measurem.
Code DE-0020-GRI
Name NUTS

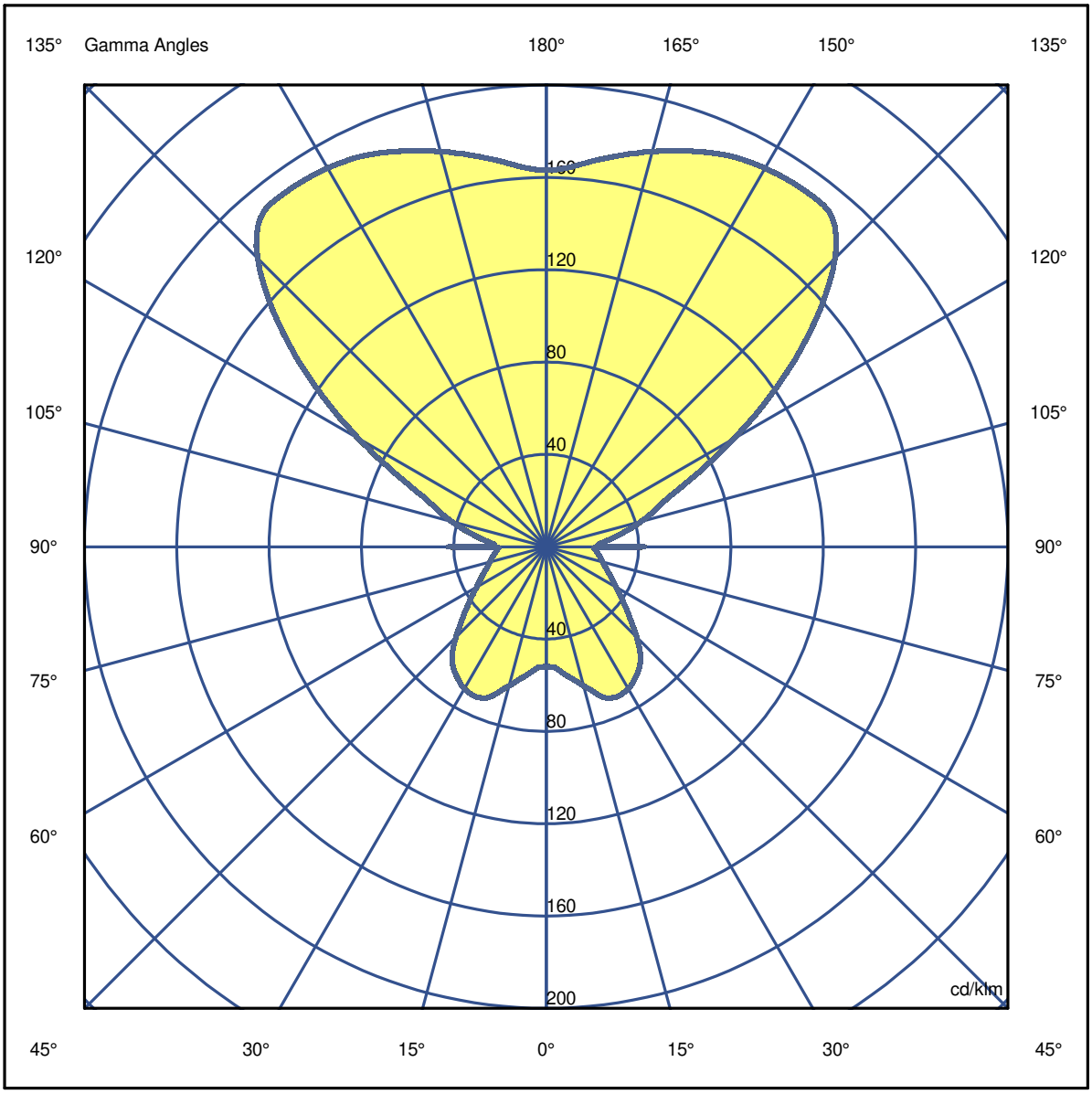
Luminaire Flux	784 lm	Luminaire Power	7.4 W	Efficacy	105.824 lm/W	Efficiency	92.10%
Source Flux	851 lm	Maximum value	190.68 cd/klm	Position	C=0.00 G=143.00	CG	Double Symmetrical

Diam=190mm



C Halfplanes

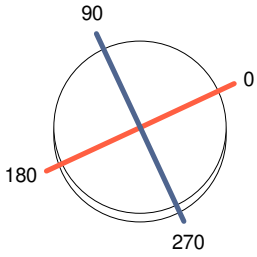




Luminaire
Code DE-0020-GRI
Name NUTS
Measurem.
Code DE-0020-GRI
Name NUTS

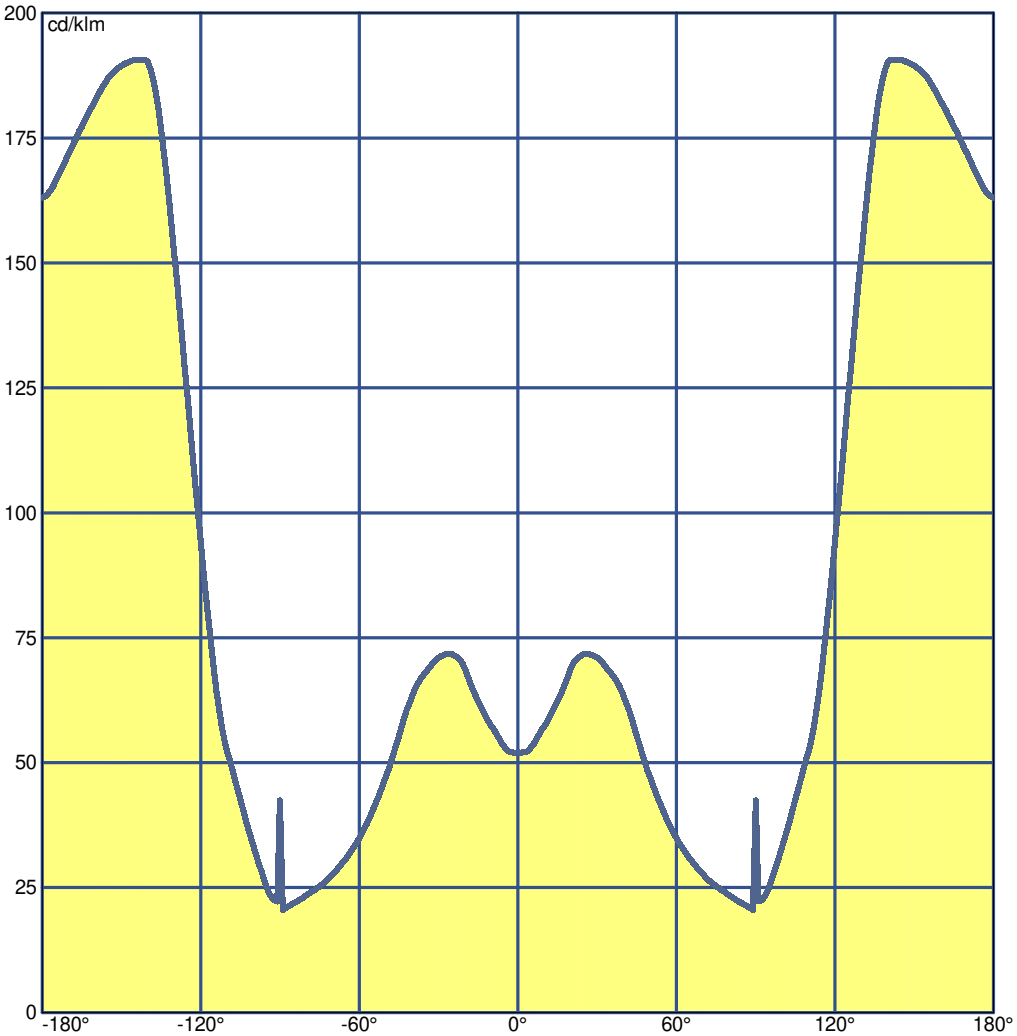
Luminaire Flux	784 lm	Luminaire Power	7.4 W	Efficacy	105.824 lm/W	Efficiency	92.10%
Source Flux	851 lm	Maximum value	190.68 cd/klm	Position	C=0.00 G=143.00	CG	Double Symmetrical

Diam=190mm



C Halfplanes





Luminaire
Code DE-0020-GRI
Name NUTS
Measurem.
Code DE-0020-GRI
Name NUTS

Luminaire Flux	784 lm	Luminaire Power	7.4 W	Efficacy	105.824 lm/W	Efficiency	92.10%
Source Flux	851 lm	Maximum value	190.68 cd/klm	Position	C=0.00 G=143.00	CG	Double Symmetrical

UGR
S = 0.250

Reflectancies										
Ceiling/Cavity	0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Walls	0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Working Plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room Dimensions	Lateral View					Viewed Endwise				
x=2H y=2H	9.2	9.9	10.3	11.0	12.5	9.2	9.9	10.3	11.0	12.5
x=2H y=3H	11.2	11.8	12.3	12.9	14.4	11.2	11.8	12.3	12.9	14.4
x=2H y=4H	12.3	12.9	13.4	14.0	15.5	12.3	12.9	13.4	14.0	15.5
x=2H y=6H	13.7	14.3	14.9	15.4	16.9	13.7	14.3	14.9	15.4	16.9
x=2H y=8H	14.5	15.1	15.7	16.2	17.7	14.5	15.1	15.7	16.2	17.7
x=2H y=12H	15.5	16.0	16.6	17.1	18.6	15.5	16.0	16.6	17.1	18.6
x=4H y=2H	9.8	10.3	10.9	11.4	12.9	9.8	10.3	10.9	11.4	12.9
x=4H y=3H	12.0	12.5	13.1	13.6	15.1	12.0	12.5	13.1	13.6	15.1
x=4H y=4H	13.4	13.8	14.5	14.9	16.5	13.4	13.8	14.5	14.9	16.5
x=4H y=6H	15.0	15.3	16.1	16.5	18.0	15.0	15.3	16.1	16.5	18.0
x=4H y=8H	15.9	16.2	17.0	17.4	18.9	15.9	16.2	17.0	17.4	18.9
x=4H y=12H	17.0	17.3	18.1	18.4	20.0	17.0	17.3	18.1	18.4	20.0
x=8H y=4H	13.9	14.2	15.0	15.3	16.9	13.9	14.2	15.0	15.3	16.9
x=8H y=6H	15.8	16.0	16.9	17.2	18.8	15.8	16.0	16.9	17.2	18.8
x=8H y=8H	16.9	17.1	18.0	18.3	19.9	16.9	17.1	18.0	18.3	19.9
x=8H y=12H	18.2	18.4	19.4	19.6	21.2	18.2	18.4	19.4	19.6	21.2
x=12H y=4H	14.0	14.3	15.1	15.4	17.0	14.0	14.3	15.1	15.4	17.0
x=12H y=6H	16.0	16.2	17.2	17.4	19.0	16.0	16.2	17.2	17.4	19.0
x=12H y=8H	17.2	17.4	18.4	18.6	20.2	17.2	17.4	18.4	18.6	20.2

Luminaire
Code DE-0020-GRI
Name NUTS
Measurem.
Code DE-0020-GRI
Name NUTS

Luminaire Flux	784 lm	Luminaire Power	7.4 W	Efficacy	105.824 lm/W	Efficiency	92.10%
Source Flux	851 lm	Maximum value	190.68 cd/klm	Position	C=0.00 G=143.00	CG	Double Symmetrical

Total Flux=851.39 Luminaire Flux=784.16

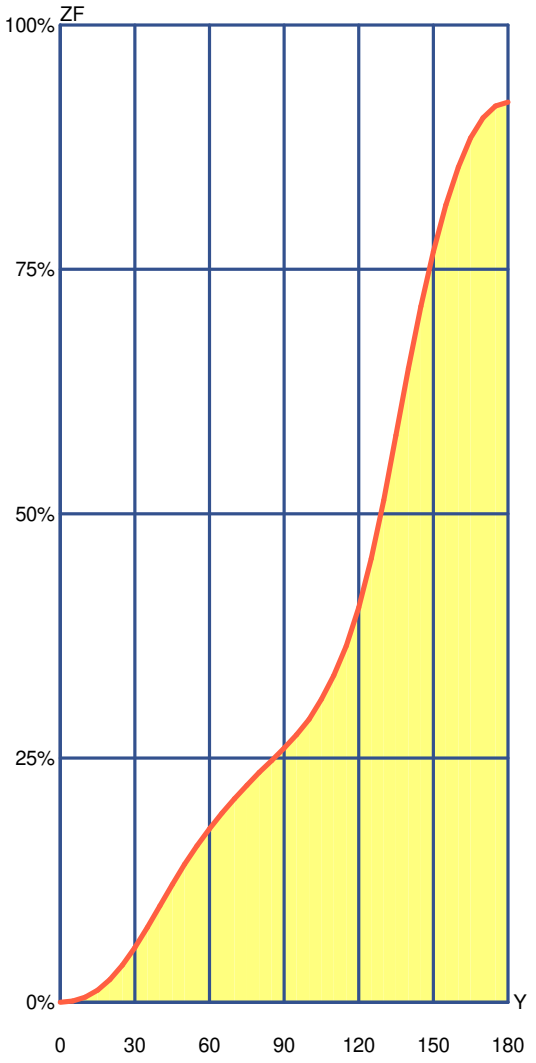
RI	0.60	0.80	1.00	1.25	1.50	2.00	2.50	3.00	4.00	5.00	10.00	20.00
DRR	0.26	0.33	0.40	0.46	0.51	0.60	0.65	0.69	0.75	0.78	0.87	0.92
RC	6	6	6	7	7	7	7	7	7	7	7	7

Zonal Flux per 1000 Lumen

Y°	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
ZF(Y)	5	23	56	99	141	177	208	235	260	290	335	404	514	649	768	855	905	921

CIE Flux Codes
40 68 86 28 92

C.I.E.	6/6/6/7/7/7/7/7/7/7/7/7	LOR	92.10319 %
D DIN 5040	D23	ULOR	66.09785 %
F UTE	0.26 G + 0.66 T	DLOR	26.00534 %
B NBN	BZ 5 / 1.25 / BZ 6	UFF	71.76499 %
RN	71.76499 %	DFF	28.23501 %
BLF	1.0	FFR	254.17026 %



Zonal Flux				
Gamma °	Flux	Sum lm	Flux [%]	Sum [%]
0°	0.00	0.00	0.00%	0.00 %
5°	1.25	1.25	0.14 %	0.14 %
10°	3.96	5.21	0.43 %	0.57 %
15°	7.10	12.31	0.77 %	1.34 %
20°	10.80	23.12	1.17 %	2.51 %
25°	14.83	37.95	1.61 %	4.12 %
30°	18.11	56.06	1.97 %	6.09 %
35°	20.49	76.54	2.22 %	8.31 %
40°	22.00	98.55	2.39 %	10.70 %
45°	22.04	120.59	2.39 %	13.09 %
50°	20.61	141.20	2.24 %	15.33 %
55°	18.95	160.15	2.06 %	17.39 %
60°	17.33	177.48	1.88 %	19.27 %
65°	15.94	193.42	1.73 %	21.00 %
70°	14.79	208.21	1.61 %	22.61 %
75°	13.79	222.00	1.50 %	24.10 %
80°	13.03	235.04	1.42 %	25.52 %
85°	12.28	247.32	1.33 %	26.85 %
90°	12.74	260.05	1.38 %	28.24 %
95°	13.71	273.76	1.49 %	29.72 %
100°	15.76	289.52	1.71 %	31.43 %
105°	20.19	309.71	2.19 %	33.63 %
110°	24.81	334.52	2.69 %	36.32 %
115°	30.00	364.52	3.26 %	39.58 %
120°	39.29	403.81	4.27 %	43.84 %
125°	50.04	453.85	5.43 %	49.28 %
130°	59.75	513.61	6.49 %	55.76 %
135°	66.54	580.15	7.22 %	62.99 %
140°	68.36	648.52	7.42 %	70.41 %
145°	63.60	712.11	6.90 %	77.32 %
150°	55.99	768.10	6.08 %	83.40 %
155°	47.68	815.79	5.18 %	88.57 %
160°	38.78	854.57	4.21 %	92.78 %
165°	29.67	884.24	3.22 %	96.01 %
170°	20.73	904.98	2.25 %	98.26 %
175°	12.11	917.09	1.32 %	99.57 %
180°	3.94	921.03	0.43 %	100.00 %

Luminaire
Code DE-0020-GRI
Name NUTS
Measurem.
Code DE-0020-GRI
Name NUTS

Luminaire Flux	784 lm	Luminaire Power	7.4 W	Efficacy	105.824 lm/W	Efficiency	92.10%
Source Flux	851 lm	Maximum value	190.68 cd/klm	Position	C=0.00 G=143.00	CG	Double Symmetrical

Utilizations CIE

Mounting Direct Normalization Normalised Suspension Ratio 1/3 Standard CIE Settings

Ceiling

K	8873	8773	8871	8771	7773	7771	7753	7553	7751	7551	7731	7331	7711	7111	5551	5531	5331	5511	5111	3331	3311	1111	0000
0.60	643	577	614	554	550	529	505	429	493	420	468	353	450	307	393	378	334	367	292	317	309	267	248
0.80	706	647	661	610	616	583	566	495	544	478	516	410	494	361	447	429	388	416	345	368	359	315	294
1.00	749	697	689	645	663	618	611	545	578	519	549	452	526	404	487	468	429	452	385	407	397	354	330
1.25	787	741	710	673	706	646	653	593	608	556	579	493	555	445	523	503	468	487	425	445	434	392	367
1.50	815	774	723	691	737	666	685	630	629	583	601	523	577	476	550	530	498	514	457	475	464	422	397
2.00	851	817	737	713	780	689	731	684	657	620	630	566	608	523	587	568	541	552	503	518	506	467	441
2.50	873	846	744	724	807	702	763	722	674	643	649	595	628	555	611	594	570	579	535	547	536	500	472
3.00	889	865	747	731	827	710	786	750	685	658	663	615	643	579	628	612	591	598	559	569	559	524	496
4.00	910	891	751	738	852	720	818	788	699	679	681	643	664	612	651	637	620	624	593	599	589	558	529
5.00	922	907	752	742	868	726	838	814	708	691	692	661	677	633	665	653	639	641	615	618	609	581	551
10.00	948	940	752	748	902	735	884	870	725	716	715	698	705	682	694	686	679	679	664	660	655	632	601
20.00	961	957	751	749	919	738	909	901	732	728	727	718	721	709	709	705	700	700	692	684	680	661	630

Wall

K	8873	8773	8871	8771	7773	7771	7753	7553	7751	7551	7731	7331	7711	7111	5551	5531	5331	5511	5111	3331	3311	1111	0000
0.60	322	287	286	256	268	240	211	176	194	162	162	118	140	90	146	124	107	108	83	98	85	69	58
0.80	380	344	328	299	318	278	259	222	232	199	199	151	174	119	175	152	134	135	106	119	106	84	69
1.00	422	388	357	330	356	305	297	259	261	229	228	179	202	144	198	175	156	157	126	136	123	96	78
1.25	462	430	382	358	392	330	335	297	288	257	256	207	230	171	220	198	179	179	148	153	140	108	87
1.50	492	463	401	379	420	348	365	328	309	280	278	231	252	195	238	216	198	198	167	167	154	118	95
2.00	534	509	424	406	459	372	409	375	338	312	309	267	285	231	262	242	225	225	196	187	175	133	105
2.50	563	541	439	424	486	388	441	410	358	335	332	294	310	260	280	262	246	246	218	202	191	144	113
3.00	584	564	450	437	506	400	465	437	373	353	349	314	328	282	293	277	262	262	236	214	204	153	120
4.00	615	599	468	457	537	418	501	477	396	379	376	346	357	317	314	300	288	287	265	234	224	168	132
5.00	637	624	481	472	558	432	527	507	413	399	395	370	379	344	330	318	307	306	286	249	240	181	142
10.00	695	687	518	513	615	471	596	584	459	451	448	433	437	416	375	367	361	359	347	292	287	219	175
20.00	740	736	551	548	660	505	649	642	498	494	492	483	485	472	414	409	405	404	396	330	327	254	207

Working Pl.

K	8873	8773	8871	8771	7773	7771	7753	7553	7751	7551	7731	7331	7711	7111	5551	5531	5331	5511	5111	3331	3311	1111	0000
0.60	366	328	341	308	305	287	236	201	227	194	187	142	158	109	172	143	127	122	99	113	97	79	68
0.80	455	415	419	384	381	355	308	266	293	255	250	195	217	155	221	190	170	167	136	148	131	103	87
1.00	526	485	479	445	442	408	368	324	348	308	303	243	269	198	263	232	209	207	171	178	160	124	104
1.25	594	555	535	503	502	460	430	384	402	362	358	295	322	246	305	274	250	249	209	209	191	145	121
1.50	646	609	577	548	549	499	479	433	445	405	402	338	366	287	338	308	284	283	242	235	217	162	134
2.00	722	689	636	611	618	555	554	510	507	471	468	407	434	356	389	361	337	338	296	274	257	189	155
2.50	773	744	675	653	665	592	606	566	550	517	514	457	482	408	424	399	376	377	337	301	286	208	169
3.00	810	784	702	683	699	619	645	608	581	551	548	496	518	449	449	426	406	406	369	322	308	223	180
4.00	859	837	737	722	744	654	699	667	622	598	594	549	568	508	484	464	446	446	414	351	338	242	194
5.00	890	872	759	746	773	675	734	706	649	628	624	585	601	548	507	489	474	474	444	369	358	254	203
10.00	958	948	805	798	838	722	814	797	707	695	692	669	677	645	557	547	537	537	519	413	406	284	225
20.00	996	990	830	826	874	748	861	851	739	733	731	718	722	704	587	581	575	575	565	439	435	304	239

LM53 SHR C0-C180: 1.754 SHR C90-C270: 1.754 SHR Square: 1.663

Luminaire
Code DE-0020-GRI
Name NUTS
Measurem.
Code DE-0020-GRI
Name NUTS

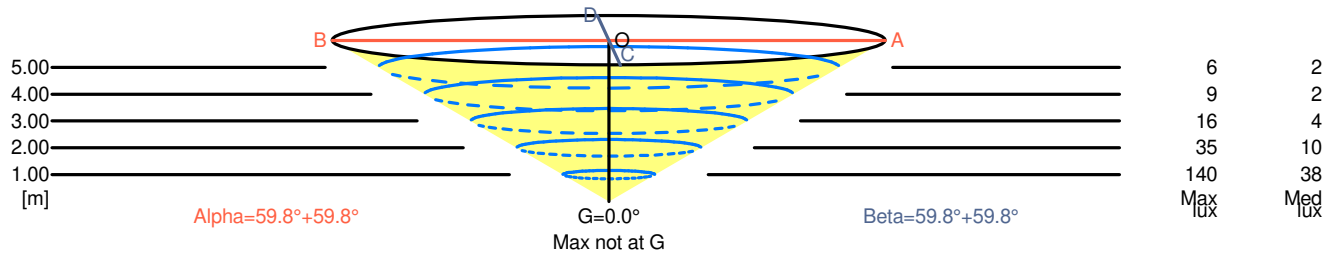
Luminaire Flux	784 lm	Luminaire Power	7.4 W	Efficacy	105.824 lm/W	Efficiency	92.10%
Source Flux	851 lm	Maximum value	190.68 cd/klm	Position	C=0.00 G=143.00	CG	Double Symmetrical

Width at 50.00 % of Max Intensity

H[m]	1.00	2.00	3.00	4.00	5.00	H[m]	1.00	2.00	3.00	4.00	5.00
OA	1.72	3.43	5.15	6.87	8.59	OC	1.72	3.43	5.15	6.87	8.59
OB	1.72	3.43	5.15	6.87	8.59	OD	1.72	3.43	5.15	6.87	8.59

Luminous Intensities [cd/klm]

	0	5	15	25	35	45	55	65	75	85
OA	138.82	141.60	150.93	159.22	162.26	150.43	104.76	58.35	36.24	21.31
OB	138.82	141.60	150.93	159.22	162.26	150.43	104.76	58.35	36.24	21.31
OC	138.82	141.60	150.93	159.22	162.26	150.43	104.76	58.35	36.24	21.31
OD	138.82	141.60	150.93	159.22	162.26	150.43	104.76	58.35	36.24	21.31



5.00	17.17	6	2	
4.00	13.74	9	2	
3.00	10.30	16	4	
2.00	6.87	35	10	
1.00	3.43	140	38	
H[m]	D[m]	Max lux	Med lux	Alpha=59.8°+59.8° Max not at G G=0.0

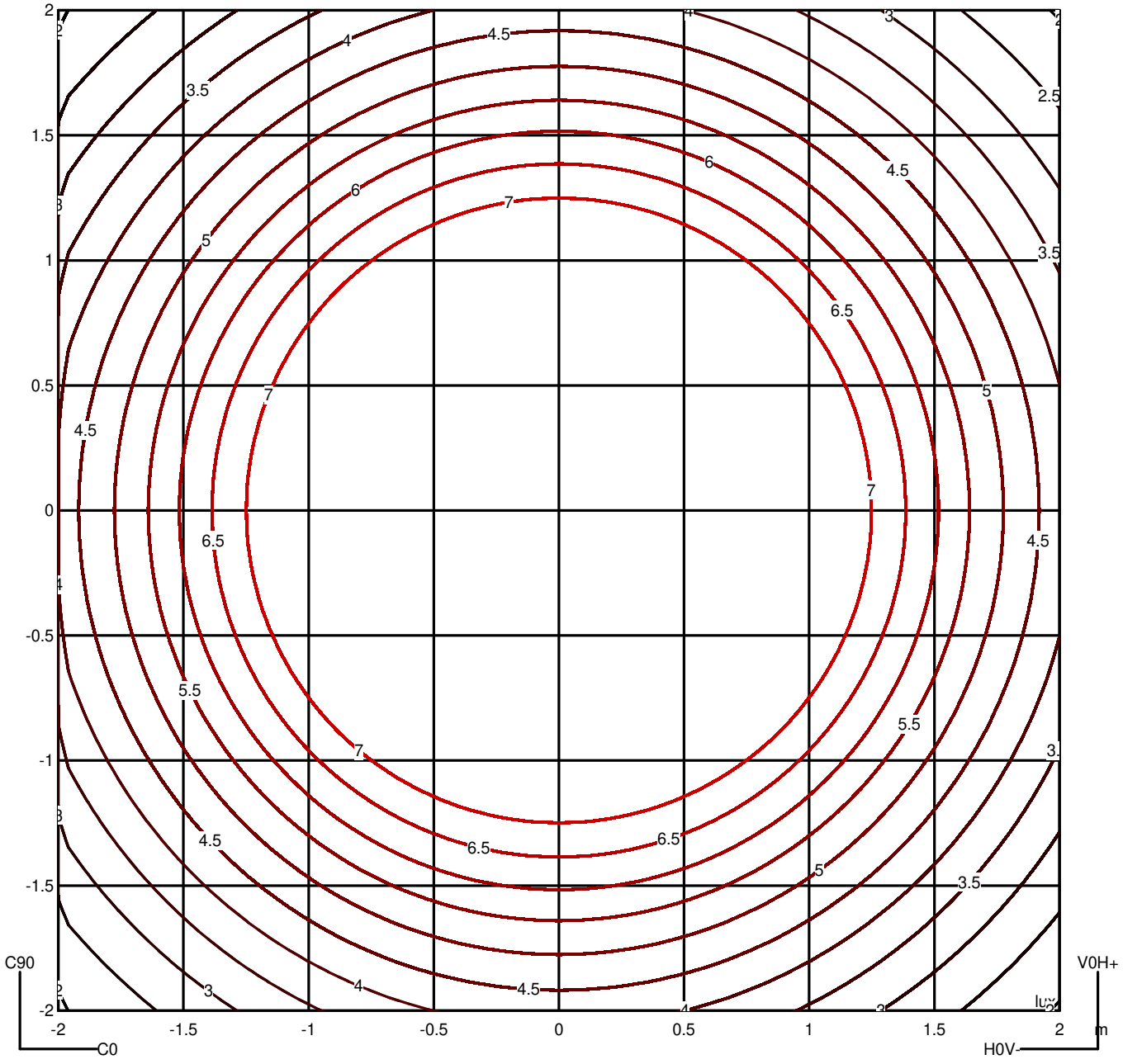
5.00	17.17	6	2	
4.00	13.74	9	2	
3.00	10.30	16	4	
2.00	6.87	35	10	
1.00	3.43	140	38	
H[m]	D[m]	Max lux	Med lux	Beta=59.8°+59.8° Max not at G G=0.0

Luminaire
Code DE-0020-GRI
Name NUTS
Measurem.
Code DE-0020-GRI
Name NUTS

Luminaire Flux	784 lm	Luminaire Power	7.4 W	Efficacy	105.824 lm/W	Efficiency	92.10%
Source Flux	851 lm	Maximum value	190.68 cd/klm	Position	C=0.00 G=143.00	CG	Double Symmetrical

Isolux (Floor)

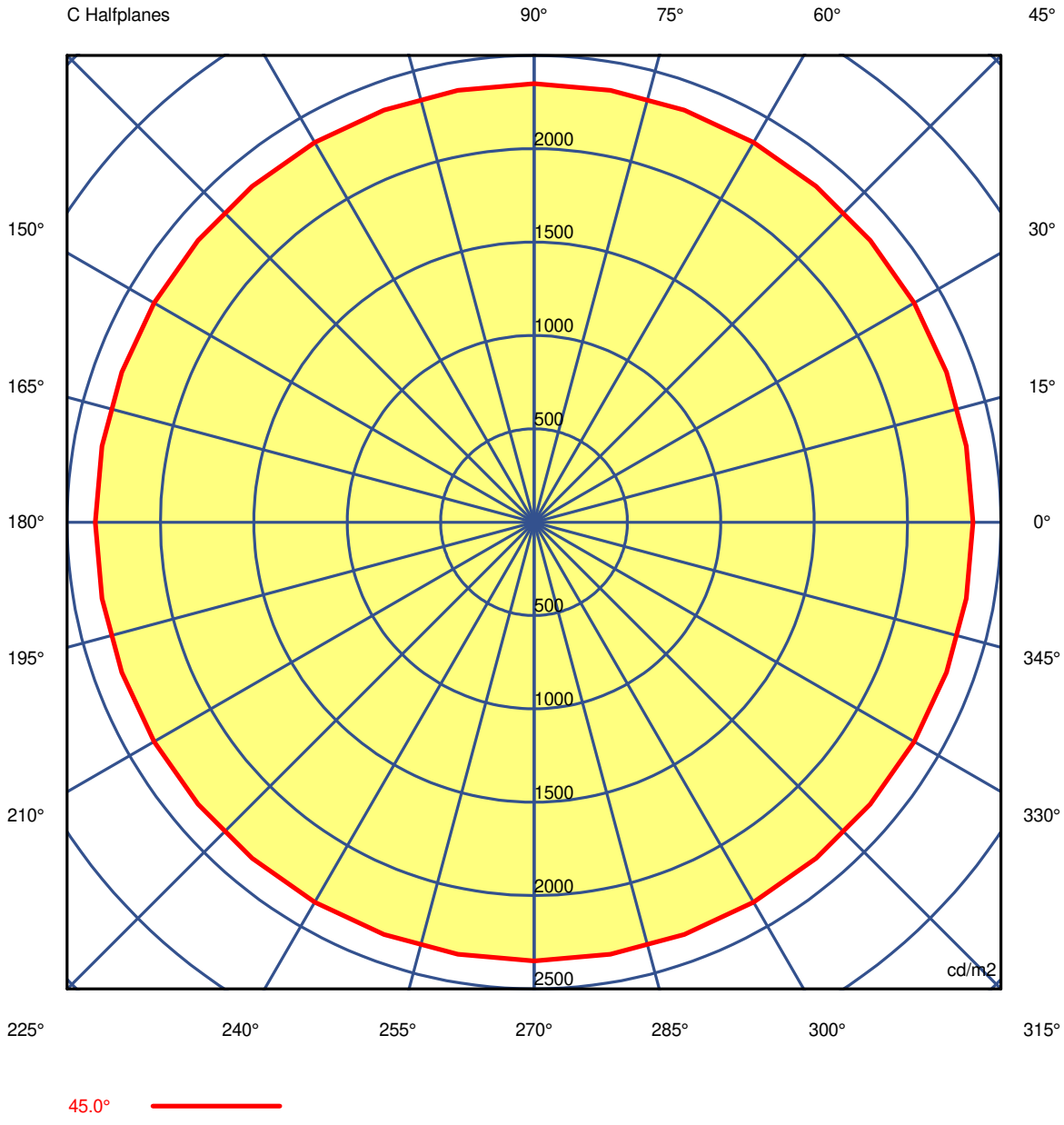
Luminaire position X=0.00m Y=0.00m Z=2.50m



Luminaire
Code DE-0020-GRI
Name NUTS
Measurem.
Code DE-0020-GRI
Name NUTS

Luminaire Flux	784 lm	Luminaire Power	7.4 W	Efficacy	105.824 lm/W	Efficiency	92.10%
Source Flux	851 lm	Maximum value	190.68 cd/klm	Position	C=0.00 G=143.00	CG	Double Symmetrical

Luminance



Luminaire
Code DE-0020-GRI
Name NUTS
Measurem.
Code DE-0020-GRI
Name NUTS

Luminaire Flux	784 lm	Luminaire Power	7.4 W	Efficacy	105.824 lm/W	Efficiency	92.10%
Source Flux	851 lm	Maximum value	190.68 cd/klm	Position	C=0.00 G=143.00	CG	Double Symmetrical

Luminance cd/m2 **Table 1/3**

	C 0.00	C 10.00	C 20.00	C 30.00	C 40.00	C 50.00	C 60.00	C 70.00	C 80.00	C 90.00	C 100.00	C 110.00	C 120.00
G 0.0	1564.68	1564.68	1564.68	1564.68	1564.68	1564.68	1564.68	1564.68	1564.68	1564.68	1564.68	1564.68	1564.68
G 5.0	1599.87	1599.87	1599.87	1599.87	1599.87	1599.87	1599.87	1599.87	1599.87	1599.87	1599.87	1599.87	1599.87
G 10.0	1746.78	1746.78	1746.78	1746.78	1746.78	1746.78	1746.78	1746.78	1746.78	1746.78	1746.78	1746.78	1746.78
G 15.0	1936.54	1936.54	1936.54	1936.54	1936.54	1936.54	1936.54	1936.54	1936.54	1936.54	1936.54	1936.54	1936.54
G 20.0	2197.47	2197.47	2197.47	2197.47	2197.47	2197.47	2197.47	2197.47	2197.47	2197.47	2197.47	2197.47	2197.47
G 25.0	2375.68	2375.68	2375.68	2375.68	2375.68	2375.68	2375.68	2375.68	2375.68	2375.68	2375.68	2375.68	2375.68
G 30.0	2462.45	2462.45	2462.45	2462.45	2462.45	2462.45	2462.45	2462.45	2462.45	2462.45	2462.45	2462.45	2462.45
G 35.0	2492.19	2492.19	2492.19	2492.19	2492.19	2492.19	2492.19	2492.19	2492.19	2492.19	2492.19	2492.19	2492.19
G 40.0	2483.36	2483.36	2483.36	2483.36	2483.36	2483.36	2483.36	2483.36	2483.36	2483.36	2483.36	2483.36	2483.36
G 45.0	2349.73	2349.73	2349.73	2349.73	2349.73	2349.73	2349.73	2349.73	2349.73	2349.73	2349.73	2349.73	2349.73
G 50.0	2198.36	2198.36	2198.36	2198.36	2198.36	2198.36	2198.36	2198.36	2198.36	2198.36	2198.36	2198.36	2198.36
G 55.0	2111.52	2111.52	2111.52	2111.52	2111.52	2111.52	2111.52	2111.52	2111.52	2111.52	2111.52	2111.52	2111.52
G 60.0	2096.24	2096.24	2096.24	2096.24	2096.24	2096.24	2096.24	2096.24	2096.24	2096.24	2096.24	2096.24	2096.24
G 65.0	2192.86	2192.86	2192.86	2192.86	2192.86	2192.86	2192.86	2192.86	2192.86	2192.86	2192.86	2192.86	2192.86
G 70.0	2428.61	2428.61	2428.61	2428.61	2428.61	2428.61	2428.61	2428.61	2428.61	2428.61	2428.61	2428.61	2428.61
G 75.0	2934.47	2934.47	2934.47	2934.47	2934.47	2934.47	2934.47	2934.47	2934.47	2934.47	2934.47	2934.47	2934.47
G 80.0	4064.86	4064.86	4064.86	4064.86	4064.86	4064.86	4064.86	4064.86	4064.86	4064.86	4064.86	4064.86	4064.86
G 85.0	7517.38	7517.38	7517.38	7517.38	7517.38	7517.38	7517.38	7517.38	7517.38	7517.38	7517.38	7517.38	7517.38
G 90.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Luminaire
Code DE-0020-GRI
Name NUTS
Measurem.
Code DE-0020-GRI
Name NUTS

Luminaire Flux	784 lm	Luminaire Power	7.4 W	Efficacy	105.824 lm/W	Efficiency	92.10%
Source Flux	851 lm	Maximum value	190.68 cd/klm	Position	C=0.00 G=143.00	CG	Double Symmetrical

Luminance cd/m2 **Table 2/3**

	C 130.00	C 140.00	C 150.00	C 160.00	C 170.00	C 180.00	C 190.00	C 200.00	C 210.00	C 220.00	C 230.00	C 240.00	C 250.00
G 0.0	1564.68	1564.68	1564.68	1564.68	1564.68	1564.68	1564.68	1564.68	1564.68	1564.68	1564.68	1564.68	1564.68
G 5.0	1599.87	1599.87	1599.87	1599.87	1599.87	1599.87	1599.87	1599.87	1599.87	1599.87	1599.87	1599.87	1599.87
G 10.0	1746.78	1746.78	1746.78	1746.78	1746.78	1746.78	1746.78	1746.78	1746.78	1746.78	1746.78	1746.78	1746.78
G 15.0	1936.54	1936.54	1936.54	1936.54	1936.54	1936.54	1936.54	1936.54	1936.54	1936.54	1936.54	1936.54	1936.54
G 20.0	2197.47	2197.47	2197.47	2197.47	2197.47	2197.47	2197.47	2197.47	2197.47	2197.47	2197.47	2197.47	2197.47
G 25.0	2375.68	2375.68	2375.68	2375.68	2375.68	2375.68	2375.68	2375.68	2375.68	2375.68	2375.68	2375.68	2375.68
G 30.0	2462.45	2462.45	2462.45	2462.45	2462.45	2462.45	2462.45	2462.45	2462.45	2462.45	2462.45	2462.45	2462.45
G 35.0	2492.19	2492.19	2492.19	2492.19	2492.19	2492.19	2492.19	2492.19	2492.19	2492.19	2492.19	2492.19	2492.19
G 40.0	2483.36	2483.36	2483.36	2483.36	2483.36	2483.36	2483.36	2483.36	2483.36	2483.36	2483.36	2483.36	2483.36
G 45.0	2349.73	2349.73	2349.73	2349.73	2349.73	2349.73	2349.73	2349.73	2349.73	2349.73	2349.73	2349.73	2349.73
G 50.0	2198.36	2198.36	2198.36	2198.36	2198.36	2198.36	2198.36	2198.36	2198.36	2198.36	2198.36	2198.36	2198.36
G 55.0	2111.52	2111.52	2111.52	2111.52	2111.52	2111.52	2111.52	2111.52	2111.52	2111.52	2111.52	2111.52	2111.52
G 60.0	2096.24	2096.24	2096.24	2096.24	2096.24	2096.24	2096.24	2096.24	2096.24	2096.24	2096.24	2096.24	2096.24
G 65.0	2192.86	2192.86	2192.86	2192.86	2192.86	2192.86	2192.86	2192.86	2192.86	2192.86	2192.86	2192.86	2192.86
G 70.0	2428.61	2428.61	2428.61	2428.61	2428.61	2428.61	2428.61	2428.61	2428.61	2428.61	2428.61	2428.61	2428.61
G 75.0	2934.47	2934.47	2934.47	2934.47	2934.47	2934.47	2934.47	2934.47	2934.47	2934.47	2934.47	2934.47	2934.47
G 80.0	4064.86	4064.86	4064.86	4064.86	4064.86	4064.86	4064.86	4064.86	4064.86	4064.86	4064.86	4064.86	4064.86
G 85.0	7517.38	7517.38	7517.38	7517.38	7517.38	7517.38	7517.38	7517.38	7517.38	7517.38	7517.38	7517.38	7517.38
G 90.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Luminaire
Code DE-0020-GRI
Name NUTS
Measurem.
Code DE-0020-GRI
Name NUTS

Luminaire Flux	784 lm	Luminaire Power	7.4 W	Efficacy	105.824 lm/W	Efficiency 92.10%
Source Flux	851 lm	Maximum value	190.68 cd/klm	Position	C=0.00 G=143.00	CG Double Symmetrical

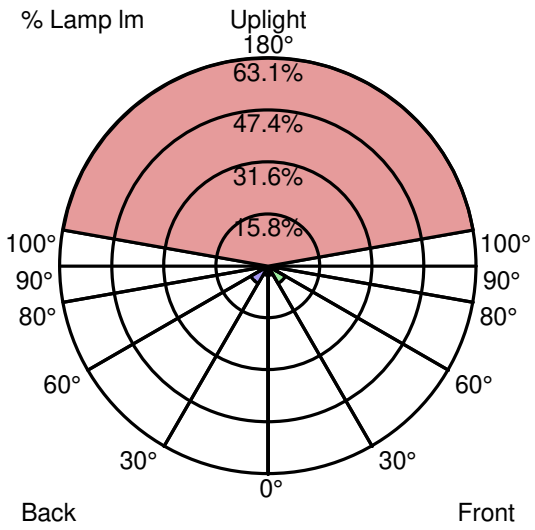
Luminance cd/m2 **Table 3/3**

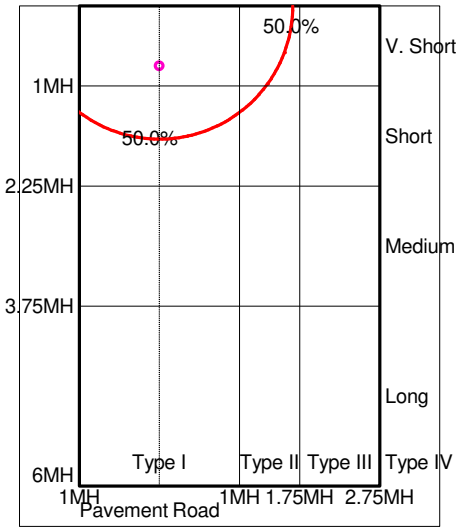
	C 260.00	C 270.00	C 280.00	C 290.00	C 300.00	C 310.00	C 320.00	C 330.00	C 340.00	C 350.00
G 0.0	1564.68	1564.68	1564.68	1564.68	1564.68	1564.68	1564.68	1564.68	1564.68	1564.68
G 5.0	1599.87	1599.87	1599.87	1599.87	1599.87	1599.87	1599.87	1599.87	1599.87	1599.87
G 10.0	1746.78	1746.78	1746.78	1746.78	1746.78	1746.78	1746.78	1746.78	1746.78	1746.78
G 15.0	1936.54	1936.54	1936.54	1936.54	1936.54	1936.54	1936.54	1936.54	1936.54	1936.54
G 20.0	2197.47	2197.47	2197.47	2197.47	2197.47	2197.47	2197.47	2197.47	2197.47	2197.47
G 25.0	2375.68	2375.68	2375.68	2375.68	2375.68	2375.68	2375.68	2375.68	2375.68	2375.68
G 30.0	2462.45	2462.45	2462.45	2462.45	2462.45	2462.45	2462.45	2462.45	2462.45	2462.45
G 35.0	2492.19	2492.19	2492.19	2492.19	2492.19	2492.19	2492.19	2492.19	2492.19	2492.19
G 40.0	2483.36	2483.36	2483.36	2483.36	2483.36	2483.36	2483.36	2483.36	2483.36	2483.36
G 45.0	2349.73	2349.73	2349.73	2349.73	2349.73	2349.73	2349.73	2349.73	2349.73	2349.73
G 50.0	2198.36	2198.36	2198.36	2198.36	2198.36	2198.36	2198.36	2198.36	2198.36	2198.36
G 55.0	2111.52	2111.52	2111.52	2111.52	2111.52	2111.52	2111.52	2111.52	2111.52	2111.52
G 60.0	2096.24	2096.24	2096.24	2096.24	2096.24	2096.24	2096.24	2096.24	2096.24	2096.24
G 65.0	2192.86	2192.86	2192.86	2192.86	2192.86	2192.86	2192.86	2192.86	2192.86	2192.86
G 70.0	2428.61	2428.61	2428.61	2428.61	2428.61	2428.61	2428.61	2428.61	2428.61	2428.61
G 75.0	2934.47	2934.47	2934.47	2934.47	2934.47	2934.47	2934.47	2934.47	2934.47	2934.47
G 80.0	4064.86	4064.86	4064.86	4064.86	4064.86	4064.86	4064.86	4064.86	4064.86	4064.86
G 85.0	7517.38	7517.38	7517.38	7517.38	7517.38	7517.38	7517.38	7517.38	7517.38	7517.38
G 90.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Luminaire
Code DE-0020-GRI
Name NUTS
Measurem.
Code DE-0020-GRI
Name NUTS

Luminaire Flux	784 lm	Luminaire Power	7.4 W	Efficacy	105.824 lm/W	Efficiency	92.10%
Source Flux	851 lm	Maximum value	190.68 cd/klm	Position	C=0.00 G=143.00	CG	Double Symmetrical

US ROAD STANDARDS



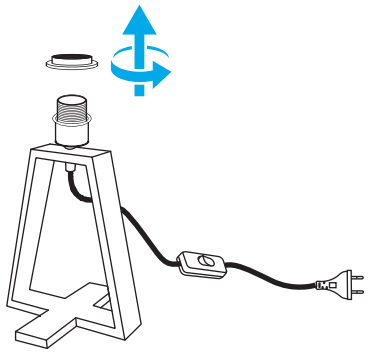


Luminaire Classification System (LCS)				
LCS Zone		Lumens	%Lamp	%Lum
FL	0° -- 30°	23.9 lm	2.8 %	3.0 %
FM	30° -- 60°	51.7 lm	6.1 %	6.6 %
FH	60° -- 80°	24.5 lm	2.9 %	3.1 %
FVH	80° -- 90°	10.6 lm	1.2 %	1.4 %
BL	0° -- 30°	23.9 lm	2.8 %	3.0 %
BM	30° -- 60°	51.7 lm	6.1 %	6.6 %
BH	60° -- 80°	24.5 lm	2.9 %	3.1 %
BVH	80° -- 90°	10.6 lm	1.2 %	1.4 %
UL	90° -- 100°	25.2 lm	3.0 %	3.2 %
UH	100° -- 180°	537.6 lm	63.1 %	68.6 %
TOTALS		784.2 lm	92.1 %	100.0 %
BUG B0 U4 G1		Type V Very Short		Quadrilateral Symmetry

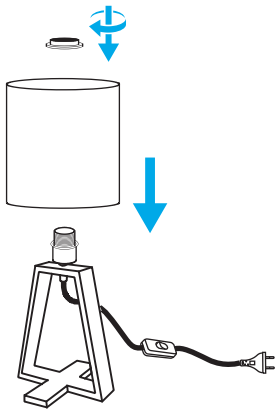
Nuts

DE-0020

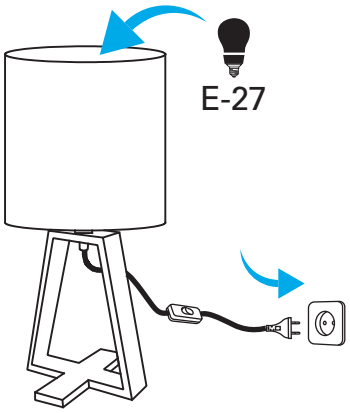
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2



3



4

