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Registered in England: Company Number 3021552  
VAT Registration Number: GB 661 1596 34

## Photometric Report

Job / Report / Date	42 / 10692 / 10692-5a / 2013.06.17
Customer	Encapsulite International Ltd.
Luminaire Range	MT50 IP68
Luminaire catalog No.	MT50 35W
Luminaire description	linear cylindrical luminaire with clear cover data derived from range test series
Lamp description	35W/840 HE Osram Lumilux
Lamp lumen output	3,300 lm
Lamp quantity	1

#### Photometric Report

- Pictures
- Luminaire information
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- Principal Axes Intensities
- Light Output Ratios & CIBSE TM5 Results
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Job / Report / Date

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Customer

Encapsulite International Ltd.

Luminaire Range

MT50 IP68

Luminaire catalog No.

MT50 35W

Luminaire description

linear cylindrical luminaire  
with clear cover

data derived from range test series

Lamp description

35W/840 HE Osram Lumilux

Lamp lumen output

3,300 lm

Lamp quantity

1



**Helvar**  
www.helvar.com

ELECTRONIC BALLAST EL1x14-35s  
220-240V 0/50-60Hz



T5:14W 0.08-0.06A  $\lambda$  0.96

T5:21,28,35W 0.18-0.09A  $\lambda$  0.98

ta = -20...+50°C

75



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Customer	Encapsulite International Ltd.
Luminaire Range	MT50 IP68
Luminaire catalog No.	MT50 35W
Luminaire description	linear cylindrical luminaire with clear cover data derived from range test series
Lamp description	35W/840 HE Osram Lumilux
Lamp lumen output	3,300 lm
Lamp quantity	1

#### Luminaire physical characteristics

##### Overall Dimensions

Length	1560mm
Width	50mm
Height	50mm

##### Visible Dimensions when installed

Length	1560mm
Width	50mm
Height	50mm

##### Luminous Dimensions

Length	1475mm
Width	50mm
Height 0°	25mm
Height 90°	0mm
Height 180°	25mm
Height 270°	0mm

##### Luminous Areas

Base	0.07375m <sup>2</sup>
Sides	0.036875m <sup>2</sup> ( 0°/180° azimuth)
Ends	0m <sup>2</sup> (90°/270° azimuth)

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#### Report Basis

All measurements taken in accordance with EN13032.

Lamp tests were performed with the lamps in a horizontal orientation.

Luminaire tests were performed with the lamps in a horizontal orientation.

The photometric centre of the luminaire was taken as the geometric centre of the lamp.

The photometric nadir was taken to be perpendicular to the front face of the reflector.

The luminaire has been treated as though it has 2 planes of symmetry through the 0°/180° plane and the 90°/270° plane.

The lumen output, light output ratio (LORL) and power consumption of the luminaire were determined at 25°C after 100 hours pre-conditioning.

Lamps used for test were provided by the customer.

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with clear cover  
data derived from range test series  
Lamp description 35W/840 HE Osram Lumilux  
Lamp lumen output 3,300 lm  
Lamp quantity 1

#### Electrical input & Photometric output characteristics

##### Control gear

1 \* Helvar EL1x14-35S

Ballast Voltage Range 220-240V  
Ballast Current Range .09-.18A  
Ballast Power Factor 0.98

Sample	Voltage (V)	Current (mA)	Power Factor	Power (W)	VA	Output (lm)	% of Nominal	Efficacy (lm/W)
Luminaire	230.0	160.0	0.988	36.3	36.8	2,779	84%	76.5
Lamp	230.0	168.8	0.989	38.4	38.8	2,952	89%	76.9

##### Electrical characteristics at 25°C

Ballast Nominal	230V	172.2mA	0.98PF	38.8W	39.6VA
Lamp Nominal	230V	152.2mA	1.00PF	35.0W	35.0VA
Luminaire	230V	160.0mA	0.99PF	36.3W	36.8VA
Lamp	230V	168.8mA	0.99PF	38.4W	38.8VA

##### Measured Electrical characteristics relative to Ballast Nominal

Luminaire	Current	93%	Power	94%	VA	93%
Lamp	Current	98%	Power	99%	VA	98%

##### Measured Electrical characteristics relative to Lamp Nominal

Luminaire	Current	105%	Power	104%	VA	105%
Lamp	Current	111%	Power	110%	VA	111%

##### Lumen Output figures used in this report (lumens)

Nominal Lamp Output	3,300
Measured Luminaire Output	2,779
Measured Lamp Output	2,952

##### Measured Lumen Output characteristics relative to Lamp Nominal Total

Luminaire	84%
Lamp	89%

##### Measured luminous efficacy at 25°C

Luminaire	76.5 lm/W
Lamp	76.9 lm/W

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The light output ratio of the luminaire was measured as 0.942 at 25°C.  
This is the ratio of the output of the luminaire to the output of the lamp.

The measured lumen output of the luminaire was 2,779 lumens at 25°C.  
This figure can be related to the nominal lumen output of the lamp quoted by the manufacturer of 3,300 lumens, to give a nominal light output ratio of 0.842.

The measured lumen output of the lamp was 2,952 lumens at 25°C.  
This figure can be related to the nominal lumen output of the lamp quoted by the manufacturer of 3,300 lumens, to give a nominal BLF of 0.894.

For lighting design calculations:

A light output ratio of 1 should be used in conjunction with the measured lumen output of the luminaire of 2,779 lumens.

or

The nominal light output ratio of 0.842 should be used in conjunction with the nominal lumen output of the lamp of 3,300 lumens.

or

The measured light output ratio of 0.942 should be used in conjunction with the measured lumen output of the lamp of 2,952 lumens.

or

The measured light output ratio of 0.942 should be used in conjunction with the nominal lumen output of the lamp of 3,300 lumens and the nominal BLF of 0.894.

This report is based on the following parameters:

The Light Output Ratio is the nominal value of 0.842.

The lamp output is the nominal value of 3,300 lumens.

There is 1 lamp in the luminaire.

No measurements relating to the ballast factor of the control gear were made.

The nominal ballast factor represented by the ratio of the measured lumen output of the lamp to the declared lumen output has been incorporated into the nominal Light Output Ratio figure. The resultant nominal LOR allows lighting calculations to be performed using the declared lamp output without having to incorporate a separate BLF calculation to allow for deviation from the nominal output due to thermal and gear effects.

If the measured LOR figure is used, the measured lumen output of the lamp should be used to perform lighting calculations. If the nominal lamp output is used with the measured LOR figure, an allowance should be made for any deviation of the lamp and gear combination from the published lumen output, represented by the nominal BLF.

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Lamp description

35W/840 HE Osram Lumilux

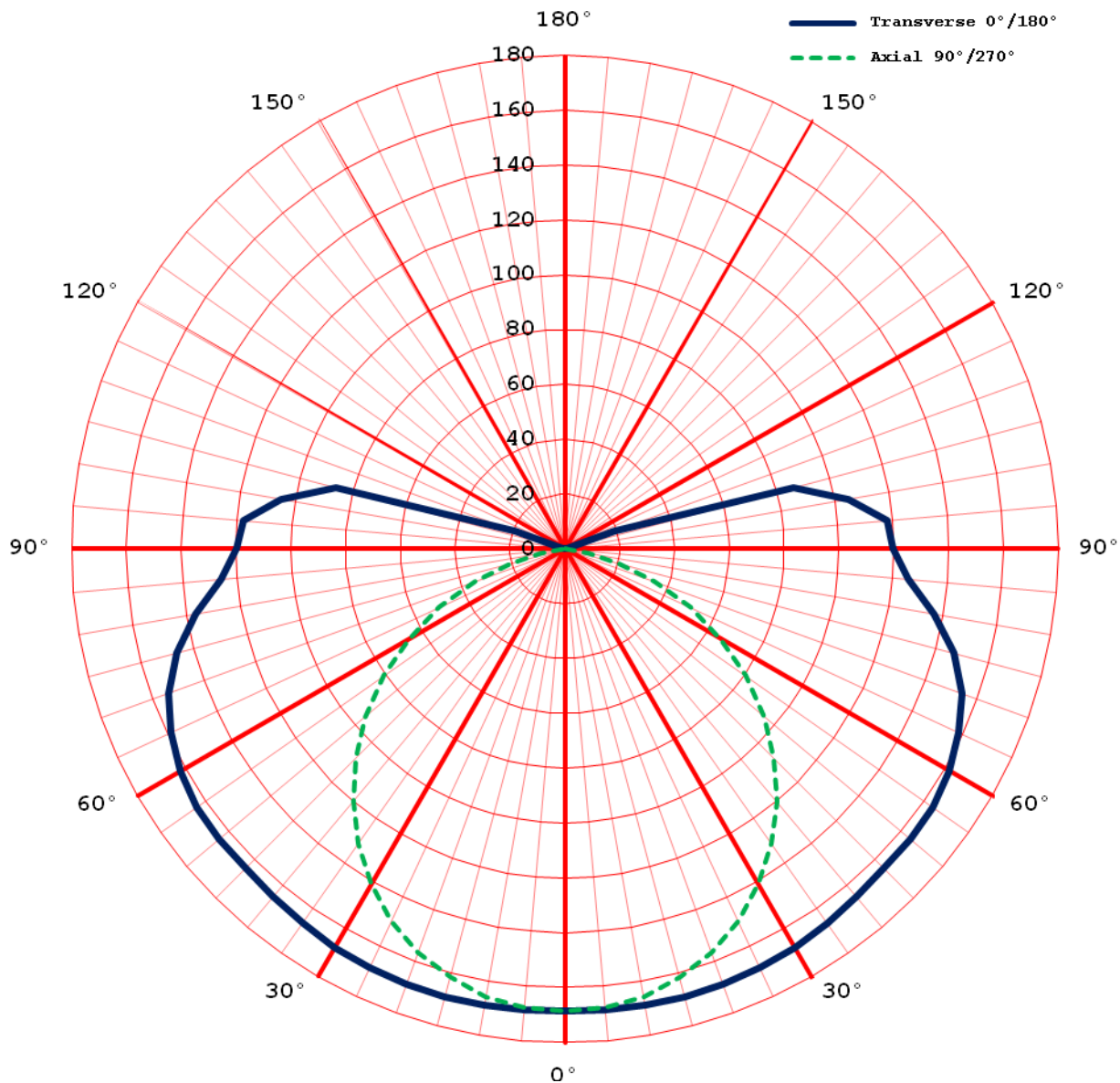
Lamp lumen output

3,300 lm

Lamp quantity

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## Average Principal Axes Luminous Intensities (cd/klm)





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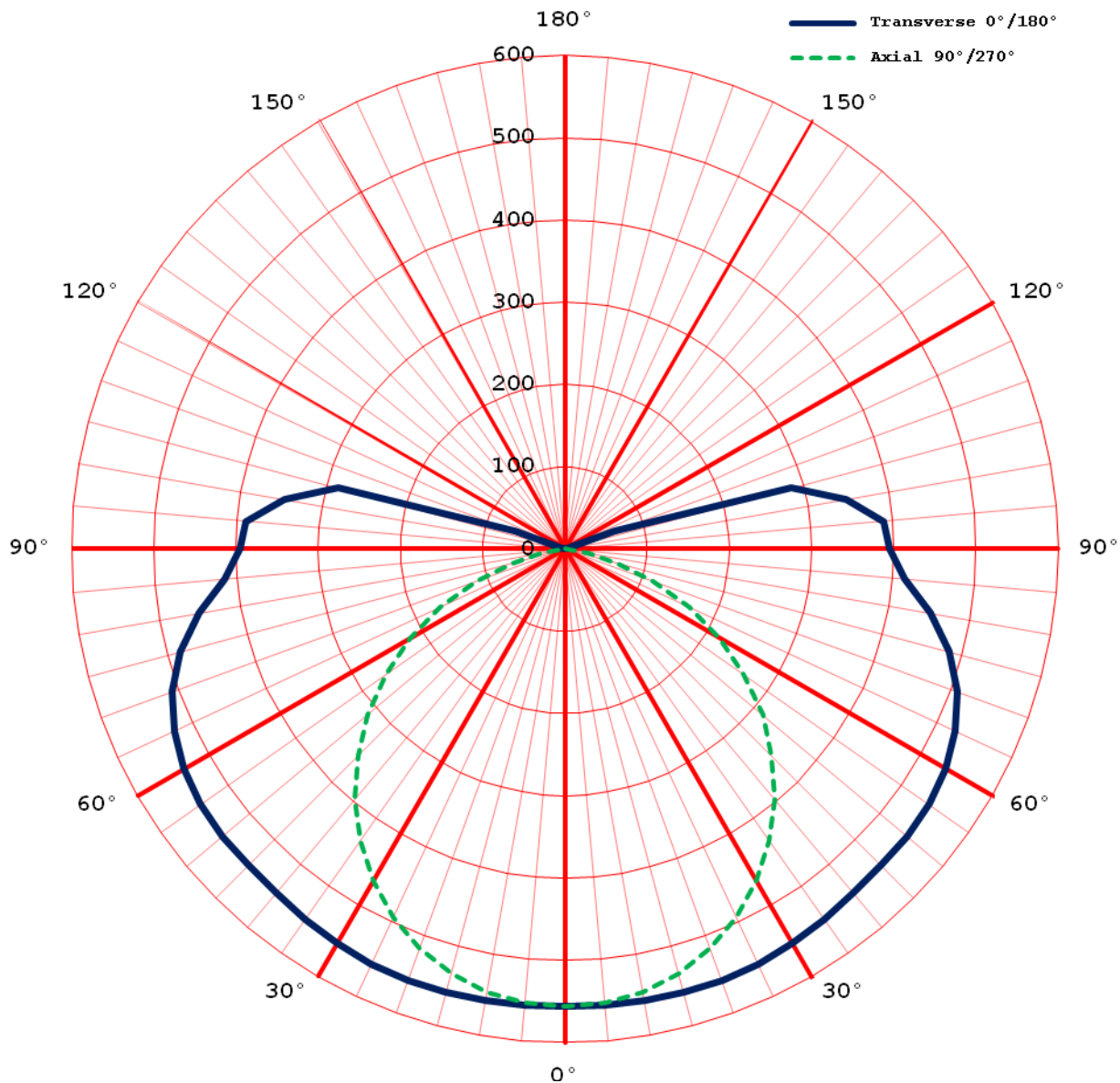
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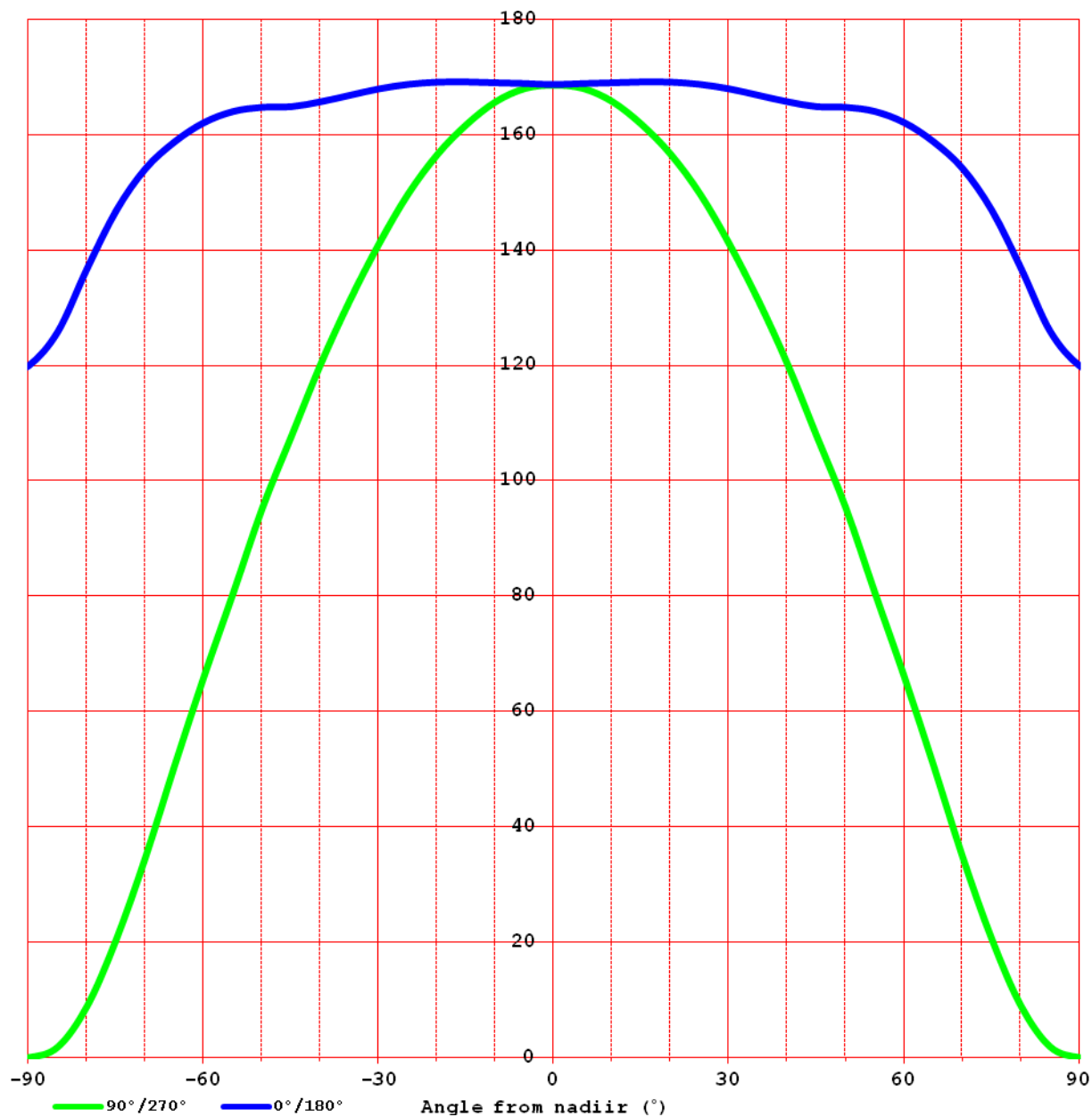
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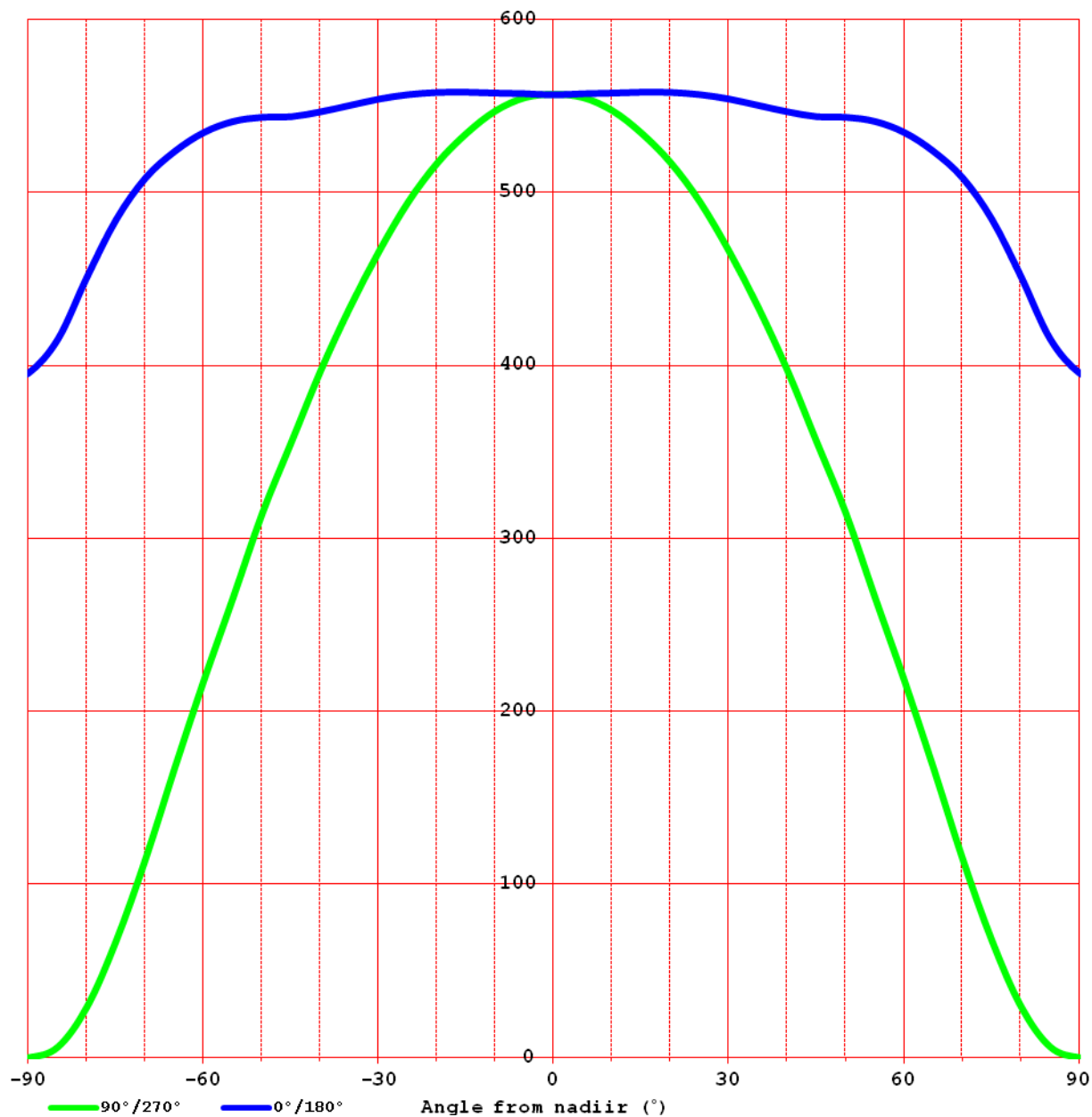
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Average Luminous Intensities (cd/Klm)

Angle	Transverse plane	Axial plane
0°	168.61	168.61
5°	168.80	168.03
10°	168.92	165.74
15°	169.07	161.79
20°	169.03	156.60
25°	168.65	149.74
30°	167.88	141.10
35°	166.76	131.26
40°	165.64	120.21
45°	164.79	107.74
50°	164.68	95.22
55°	163.94	80.46
60°	162.02	66.01
65°	158.70	50.67
70°	154.04	34.71
75°	146.79	20.49
80°	136.74	8.91
85°	125.83	1.86
90°	119.89	0.00
95°	117.89	0.00
100°	105.17	0.00
105°	86.60	0.00
110°	19.35	0.00
115°	0.73	0.00
120°	0.42	0.00
125°	0.00	0.00
130°	0.00	0.00
135°	0.00	0.00
140°	0.00	0.00
145°	0.00	0.00
150°	0.00	0.00
155°	0.00	0.00
160°	0.00	0.00
165°	0.00	0.00
170°	0.00	0.00
175°	0.00	0.00
180°	0.00	0.00

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Average Luminous Intensities (cd)

Angle	Transverse plane	Axial plane
0°	556.41	556.41
5°	557.05	554.49
10°	557.43	546.95
15°	557.93	533.91
20°	557.80	516.77
25°	556.53	494.14
30°	553.99	465.62
35°	550.30	433.16
40°	546.61	396.71
45°	543.81	355.54
50°	543.43	314.23
55°	541.01	265.53
60°	534.66	217.85
65°	523.72	167.21
70°	508.33	114.54
75°	484.42	67.60
80°	451.23	29.40
85°	415.23	6.13
90°	395.64	0.00
95°	389.03	0.00
100°	347.06	0.00
105°	285.78	0.00
110°	63.84	0.00
115°	2.42	0.00
120°	1.40	0.00
125°	0.00	0.00
130°	0.00	0.00
135°	0.00	0.00
140°	0.00	0.00
145°	0.00	0.00
150°	0.00	0.00
155°	0.00	0.00
160°	0.00	0.00
165°	0.00	0.00
170°	0.00	0.00
175°	0.00	0.00
180°	0.00	0.00

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Light Output Ratios	Up	0.11
	Down	0.74
	Total	0.84

Spacing to Height Ratios	SHR NOM	1.75
	SHR MAX	1.83
	SHR MAX TRANS	2.43

Utilisation Factors UF(F) Standard Presentation SHR NOM = 1.75

Room Reflectances			Room Index									
C	W	F	0.75	1.00	1.25	1.50	2.00	2.50	3.00	4.00	5.00	
.70	.50	.20	N/A	.48	.54	.58	.64	.68	.71	.76	.79	
	.30		N/A	.41	.47	.51	.58	.62	.66	.71	.75	
	.10		N/A	.35	.41	.46	.53	.58	.61	.67	.71	
.50	.50	.20	N/A	.45	.50	.54	.60	.64	.66	.70	.73	
	.30		N/A	.39	.44	.48	.54	.59	.62	.67	.70	
	.10		N/A	.34	.39	.44	.50	.55	.58	.63	.67	
.30	.50	.20	N/A	.42	.47	.50	.56	.59	.62	.65	.68	
	.30		N/A	.37	.42	.46	.51	.55	.58	.62	.65	
	.10		N/A	.33	.38	.42	.48	.52	.55	.60	.63	
.00	.00	.00	N/A	.29	.34	.37	.43	.47	.49	.54	.56	
BZ Class			N/A	6	6	6	6	6	6	6	6	

CIE Flux code 33 / 61 / 83 / 87 / 84

CIE Room Index	0.60	0.80	1.00	1.25	1.50	2.00	2.50	3.00	4.00	5.00	10.0	20.0
CIE DRR	0.21	0.28	0.34	0.41	0.46	0.54	0.60	0.65	0.70	0.74	0.81	0.85
CIE class	7	7	7	8	8	8	8	8	8	8	9	-

Flux Fraction Ratio 0.14  
DIN Class 0.84 B

Calculated in accordance with CIBSE Technical Memorandum No. 5 1980

In accordance with TM5, this UF table is valid for values of SHR from 0.5 below SHR NOM to 0.5 above SHR NOM. SHR MAX is a separate limitation.

Reflectances given in the UF table are the effective reflectances of the ceiling cavity, walls and floor cavity, and must be determined for the actual room in which the luminaire will be used.

UF(F), UF(W), and UF(C) for 0% reflectance of the room surfaces are equivalent to DF(F), DF(W) and DF(C) respectively.

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Luminaire catalog No.

MT50 35W

Luminaire description

linear cylindrical luminaire  
with clear cover

data derived from range test series

Lamp description

35W/840 HE Osram Lumilux

Lamp lumen output

3,300 lm

Lamp quantity

1

Angle

Aspect Factors

	Parallel plane	Perpendicular plane
0°	0.000	0.000
5°	0.087	0.004
10°	0.173	0.015
15°	0.255	0.033
20°	0.334	0.058
25°	0.407	0.089
30°	0.474	0.123
35°	0.533	0.161
40°	0.585	0.201
45°	0.628	0.241
50°	0.664	0.279
55°	0.692	0.315
60°	0.712	0.347
65°	0.726	0.374
70°	0.734	0.394
75°	0.739	0.408
80°	0.740	0.416
85°	0.741	0.418
90°	0.741	0.419



















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## Zonal Flux Calculations

Angles	Individual	Cumulative
0° - 5°	0.5%	0.5%
5° - 10°	1.4%	1.9%
10° - 15°	2.3%	4.2%
15° - 20°	3.2%	7.5%
20° - 25°	4.0%	11.5%
25° - 30°	4.7%	16.2%
30° - 35°	5.3%	21.5%
35° - 40°	5.8%	27.4%
40° - 45°	6.2%	33.6%
45° - 50°	6.5%	40.1%
50° - 55°	6.7%	46.7%
55° - 60°	6.7%	53.5%
60° - 65°	6.7%	60.1%
65° - 70°	6.5%	66.6%
70° - 75°	6.2%	72.8%
75° - 80°	5.7%	78.5%
80° - 85°	5.1%	83.5%
85° - 90°	4.6%	88.1%
90° - 95°	4.2%	92.3%
95° - 100°	3.6%	96.0%
100° - 105°	2.7%	98.7%
105° - 110°	1.2%	99.9%
110° - 115°	0.1%	100.0%
115° - 120°	0.0%	100.0%
120° - 125°	0.0%	100.0%
125° - 130°	0.0%	100.0%
130° - 135°	0.0%	100.0%
135° - 140°	0.0%	100.0%
140° - 145°	0.0%	100.0%
145° - 150°	0.0%	100.0%
150° - 155°	0.0%	100.0%
155° - 160°	0.0%	100.0%
160° - 165°	0.0%	100.0%
165° - 170°	0.0%	100.0%
170° - 175°	0.0%	100.0%
175° - 180°	0.0%	100.0%



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Averaged Luminance Values (cd/m<sup>2</sup>)

Elevation(°)	Azimuth(°)						
	0.0°	30.0°	60.0°	90.0°	120.0°	150.0°	180.0°
45°	6952	6744	6361	6818	6361	6744	6952
50°	7183	6886	6261	6629	6261	6886	7183
55°	7461	7115	6203	6277	6203	7115	7461
60°	7770	7404	6168	5908	6168	7404	7770
65°	8109	7696	6271	5365	6271	7696	8109
70°	8490	8027	6415	4541	6415	8027	8490
75°	8855	8379	6566	3542	6566	8379	8855
80°	9186	8734	6629	2296	6629	8734	9186
85°	9620	9046	6690	954	6690	9046	9620
	180.0°	210.0°	240.0°	270.0°	300.0°	330.0°	0.0°
45°	6952	6744	6361	6818	6361	6744	6952
50°	7183	6886	6261	6629	6261	6886	7183
55°	7461	7115	6203	6277	6203	7115	7461
60°	7770	7404	6168	5908	6168	7404	7770
65°	8109	7696	6271	5365	6271	7696	8109
70°	8490	8027	6415	4541	6415	8027	8490
75°	8855	8379	6566	3542	6566	8379	8855
80°	9186	8734	6629	2296	6629	8734	9186
85°	9620	9046	6690	954	6690	9046	9620

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Lamp lumen output

3,300 lm

Lamp quantity

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Non averaged Luminance Values (cd/m<sup>2</sup>)

Elevation(°)

Azimuth(°)

	0.0°	30.0°	60.0°	90.0°	120.0°	150.0°	180.0°
45°	6905	6746	6396	6876	6421	6803	7000
50°	7132	6884	6324	6727	6323	6951	7234
55°	7396	7104	6268	6354	6246	7185	7527
60°	7712	7398	6235	5972	6237	7473	7828
65°	8046	7688	6343	5491	6310	7786	8171
70°	8441	8034	6502	4638	6437	8111	8538
75°	8801	8392	6676	3837	6596	8452	8909
80°	9132	8812	6671	2363	6677	8785	9240
85°	9507	9245	6962	1108	6656	9091	9733
	180.0°	210.0°	240.0°	270.0°	300.0°	330.0°	0.0°
45°	7000	6763	6348	6760	6280	6662	6905
50°	7234	6894	6255	6530	6143	6816	7132
55°	7527	7137	6173	6200	6123	7035	7396
60°	7828	7413	6154	5843	6047	7332	7712
65°	8171	7717	6257	5238	6174	7592	8046
70°	8538	8038	6421	4444	6299	7927	8441
75°	8909	8401	6565	3246	6427	8272	8801
80°	9240	8752	6690	2229	6478	8588	9132
85°	9733	9082	6682	800	6459	8765	9507

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Averaged Luminance Values (cd/m<sup>2</sup>/klm)

Elevation(°)	Azimuth(°)						
	0.0°	30.0°	60.0°	90.0°	120.0°	150.0°	180.0°
45°	2107	2044	1928	2066	1928	2044	2107
50°	2177	2087	1897	2009	1897	2087	2177
55°	2261	2156	1880	1902	1880	2156	2261
60°	2355	2244	1869	1790	1869	2244	2355
65°	2457	2332	1900	1626	1900	2332	2457
70°	2573	2433	1944	1376	1944	2433	2573
75°	2683	2539	1990	1073	1990	2539	2683
80°	2784	2647	2009	696	2009	2647	2784
85°	2915	2741	2027	289	2027	2741	2915
	180.0°	210.0°	240.0°	270.0°	300.0°	330.0°	0.0°
45°	2107	2044	1928	2066	1928	2044	2107
50°	2177	2087	1897	2009	1897	2087	2177
55°	2261	2156	1880	1902	1880	2156	2261
60°	2355	2244	1869	1790	1869	2244	2355
65°	2457	2332	1900	1626	1900	2332	2457
70°	2573	2433	1944	1376	1944	2433	2573
75°	2683	2539	1990	1073	1990	2539	2683
80°	2784	2647	2009	696	2009	2647	2784
85°	2915	2741	2027	289	2027	2741	2915

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Customer

Encapsulite International Ltd.

Luminaire Range

MT50 IP68

Luminaire catalog No.

MT50 35W

Luminaire description

linear cylindrical luminaire  
with clear cover

data derived from range test series

Lamp description

35W/840 HE Osram Lumilux

Lamp lumen output

3,300 lm

Lamp quantity

1

Non averaged Luminance Values (cd/m<sup>2</sup>/klm)

Elevation(°)

Azimuth(°)

	0.0°	30.0°	60.0°	90.0°	120.0°	150.0°	180.0°
45°	2092	2044	1938	2084	1946	2062	2121
50°	2161	2086	1916	2038	1916	2106	2192
55°	2241	2153	1899	1926	1893	2177	2281
60°	2337	2242	1889	1810	1890	2265	2372
65°	2438	2330	1922	1664	1912	2359	2476
70°	2558	2435	1970	1405	1951	2458	2587
75°	2667	2543	2023	1163	1999	2561	2700
80°	2767	2670	2021	716	2023	2662	2800
85°	2881	2801	2110	336	2017	2755	2949
	180.0°	210.0°	240.0°	270.0°	300.0°	330.0°	0.0°
45°	2121	2049	1924	2048	1903	2019	2092
50°	2192	2089	1895	1979	1862	2066	2161
55°	2281	2163	1871	1879	1855	2132	2241
60°	2372	2246	1865	1771	1832	2222	2337
65°	2476	2338	1896	1587	1871	2301	2438
70°	2587	2436	1946	1347	1909	2402	2558
75°	2700	2546	1989	984	1948	2507	2667
80°	2800	2652	2027	675	1963	2602	2767
85°	2949	2752	2025	242	1957	2656	2881

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Customer Encapsulite International Ltd.  
Luminaire Range MT50 IP68  
Luminaire catalog No. MT50 35W  
Luminaire description linear cylindrical luminaire  
with clear cover  
data derived from range test series  
Lamp description 35W/840 HE Osram Lumilux  
Lamp lumen output 3,300 lm  
Lamp quantity 1

Maximum Non averaged Luminance Values (cd/m<sup>2</sup>)

Elevation(°)

-----  
Maximum Azimuth Angle  
-----

45°	7000	180°
50°	7234	180°
55°	7527	180°
60°	7828	180°
65°	8171	180°
70°	8538	180°
75°	8909	180°
80°	9240	180°
85°	9733	180°

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Luminaire description linear cylindrical luminaire  
with clear cover  
data derived from range test series  
Lamp description 35W/840 HE Osram Lumilux  
Lamp lumen output 3,300 lm  
Lamp quantity 1

VDT Luminance Information

BS EN 12464 (2002) / CIBSE LG7 (2005) / CIBSE LG3 (2001)

Permitted Usage according to Screen Type and Luminance Limit Angle	Limiting luminance (cd/m <sup>2</sup> )	Use permitted at Luminance Limit Angle(°)	
		55°	65°
Screen Type III (No screen treatment) used with some negative polarity software	200	NO	NO
Screen Type I and II (Good or moderate screen treatment) used with some negative polarity software	500	NO	NO
Screen Type III (No screen treatment) used with only positive polarity software	1000	NO	NO
Screen Type I and II (Good or moderate screen treatment) used with only positive polarity software	1500	NO	NO

VDT Luminance Information

BS EN 12464 (2011) / CIBSE LG7 (2012)

Permitted Usage according to Screen Type and Luminance Limit Angle	Limiting luminance (cd/m <sup>2</sup> )	Use permitted at Luminance Limit Angle(°)	
		55°	65°
Medium luminance screen ( L <= 200 cdm <sup>2</sup> ) Case B negative polarity and/or higher requirements	1000	-	NO
Medium luminance screen ( L <= 200 cdm <sup>2</sup> ) Case A positive polarity and normal requirements	1500	-	NO
High luminance screen ( L > 200 cd/m <sup>2</sup> ) Case B negative polarity and/or higher requirements	1500	-	NO
High luminance screen ( L > 200 cd/m <sup>2</sup> ) Case A positive polarity and normal requirements	3000	-	NO

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Customer

Encapsulite International Ltd.

Luminaire Range

MT50 IP68

Luminaire catalog No.

MT50 35W

Luminaire description

linear cylindrical luminaire  
with clear cover

data derived from range test series

Lamp description

35W/840 HE Osram Lumilux

Lamp lumen output

3,300 lm

Lamp quantity

1

## Uncorrected Glare Indices

Reflectance of

Ceiling	.70	.70	.50	.50	.30	.70	.70	.50	.50	.30
Wall	.50	.30	.50	.30	.30	.50	.30	.50	.30	.30
Floor Cavity	.20	.20	.20	.20	.20	.20	.20	.20	.20	.20

Room dimension

Viewed crosswise

Viewed endwise

X Y

0°

90°

2H 2H	14.3	16.2	15.0	16.9	17.7	10.8	12.7	11.4	13.4	14.1
3H	17.8	19.6	18.5	20.3	21.1	12.7	14.5	13.4	15.2	16.0
4H	19.5	21.2	20.2	21.9	22.7	13.4	15.1	14.1	15.8	16.6
6H	21.3	22.9	22.0	23.6	24.4	13.8	15.4	14.5	16.1	17.0
8H	22.1	23.7	22.8	24.4	25.2	13.9	15.4	14.6	16.2	17.0
12H	23.0	24.5	23.8	25.3	26.1	13.9	15.4	14.6	16.1	17.0
4H 2H	15.3	17.0	16.0	17.7	18.5	13.0	14.7	13.7	15.4	16.2
3H	19.1	20.6	19.9	21.4	22.2	15.3	16.8	16.1	17.6	18.4
4H	21.1	22.5	21.9	23.2	24.1	16.3	17.7	17.1	18.4	19.3
6H	23.1	24.3	23.8	25.1	26.0	16.9	18.2	17.7	19.0	19.9
8H	24.1	25.2	24.9	26.0	26.9	17.2	18.3	18.0	19.1	20.0
12H	25.1	26.2	25.9	27.0	27.9	17.3	18.4	18.1	19.2	20.1
8H 4H	21.8	22.9	22.6	23.8	24.7	18.5	19.6	19.3	20.4	21.3
6H	24.0	25.0	24.9	25.9	26.8	19.5	20.5	20.3	21.3	22.2
8H	25.4	26.2	26.2	27.1	28.0	20.0	20.9	20.8	21.7	22.7
12H	26.6	27.4	27.5	28.3	29.2	20.3	21.1	21.1	21.9	22.9
12H 4H	21.9	23.0	22.7	23.8	24.8	19.4	20.5	20.2	21.3	22.2
6H	24.4	25.3	25.2	26.1	27.0	20.7	21.6	21.5	22.4	23.4
8H	25.7	26.5	26.6	27.4	28.3	21.3	22.1	22.1	22.9	23.9

Calculated in accordance with CIBSE Technical Memorandum No. 10 1985

Customer

Encapsulite International Ltd.

Luminaire Range

MT50 IP68

Luminaire catalog No.

MT50 35W

Luminaire description

linear cylindrical luminaire  
with clear cover

data derived from range test series

Lamp description

35W/840 HE Osram Lumilux

Lamp lumen output

3,300 lm

Lamp quantity

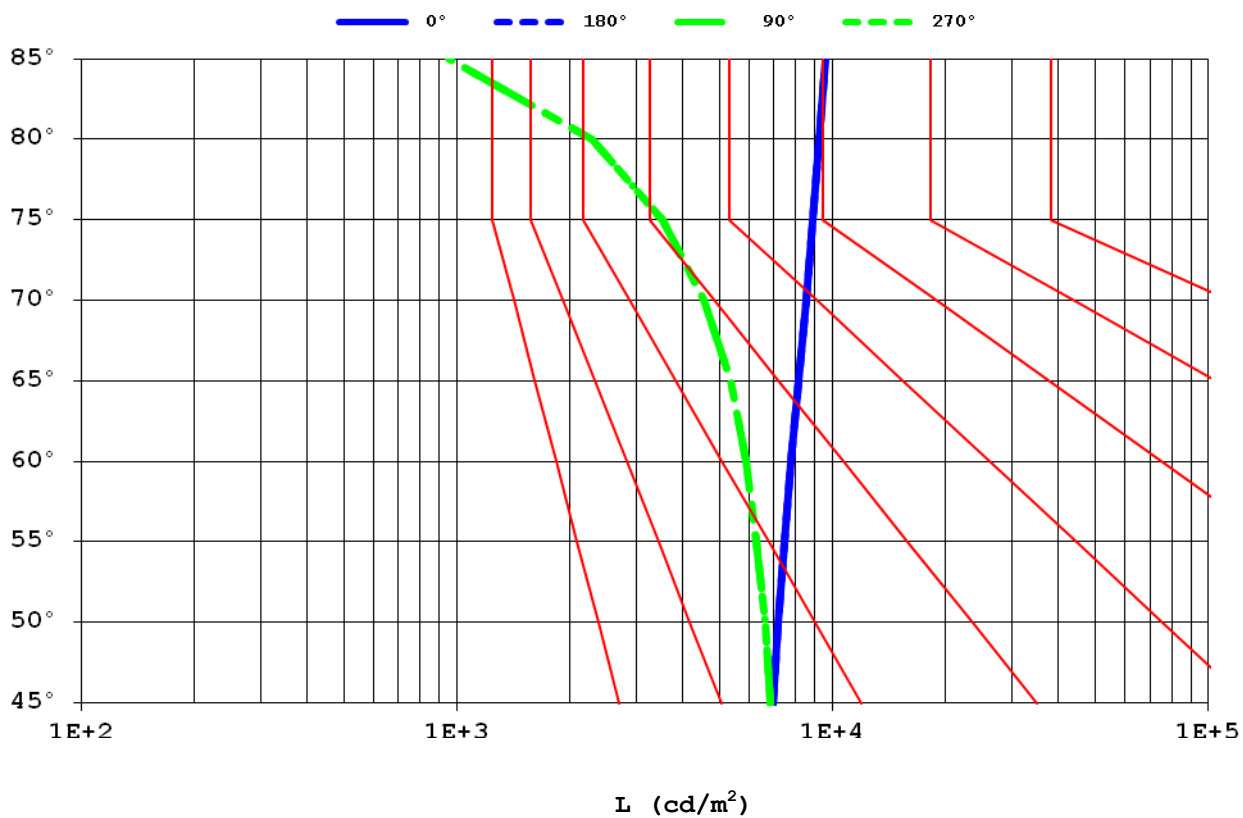
1

## CIE Glare Limiting (Soellnor) Diagram

Glare Quality  
Rating Class

Service values of illuminance

1.15	A	2000	1000	500	<300				
1.50	B		2000	1000	500	<300			
1.85	C			2000	1000	500	<300		
2.20	D				2000	1000	500	<300	
2.55	E					2000	1000	500	<300
		a	b	c	d	e	f	g	h





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Customer	Encapsulite International Ltd.
Luminaire Range	MT50 IP68
Luminaire catalog No.	MT50 35W
Luminaire description	linear cylindrical luminaire with clear cover data derived from range test series
Lamp description	35W/840 HE Osram Lumilux
Lamp lumen output	3,300 lm
Lamp quantity	1

#### Comments

It is recommended that point to point calculations are used when designing lighting schemes in order to accurately predict uniformity. Data files in various formats are available to allow easy transfer of this data to a computer. Please enquire for details.

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Customer Encapsulite International Ltd.  
Luminaire Range MT50 IP68  
Luminaire catalog No. MT50 35W  
Luminaire description linear cylindrical luminaire  
with clear cover  
data derived from range test series  
Lamp description 35W/840 HE Osram Lumilux  
Lamp lumen output 3,300 lm  
Lamp quantity 1

#### Quick Design Table

Based on: reflectances of Ceiling = 0.5  
Wall = 0.5  
Floor = 0.2  
Room Index = 2.00  
lamp output = 3300 lumens  
ballast lumen factor = 1.00

To achieve an Illuminance of 100 lux

Surface Area (m <sup>2</sup> )	20	30	40	50	80	100	200	300	500
No. of luminaires	1.0	1.5	2.0	2.5	4.1	5.1	10.2	15.2	25.4