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For
Photometric Report

Comparative

Use ONLY

Job / Report / Date

42 / 7608 / 760813a / 2006.03.20

Customer

SLP

Luminaire Range

Hi Cell

Luminaire catalog No.

HC80T5-PC-1200-W

Luminaire description

Hi cell Louvre

Polycarbonate

White

Single lamp

Lamp description

54 W T5

Lamp lumen output

4450lm

No. of lamps in luminaire

1

Photometric Report

Pictures

Luminaire information

Report basis

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Light Output Ratios & CIBSE TM5 Results

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Zonal Flux Calculations

Luminance calculations

CIBSE LG3 Maximum Luminance table

CIBSE TM10 Glare Index Results

CIE Glare Limiting (Soellnor) Diagram

Comments

Quick Design Table

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Lamp description	54 W T5
Lamp lumen output	4450lm
No. of lamps in luminaire	1

Luminaire physical characteristics

Overall Dimensions

Length	607mm
Width	95mm
Height	68mm

Visible Dimensions when installed

Length	607mm
Width	95mm
Height	68mm

Luminous Dimensions

Length	1074mm
Width	85mm
Height 0°	0mm
Height 90°	0mm
Height 180°	0mm
Height 270°	0mm

Luminous Areas

Base	0.09129m ²
Sides	0m ² (0°/180° azimuth)
Ends	0m ² (90°/270° azimuth)

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No. of lamps in luminaire	1

Report Basis

All measurements taken in accordance with BS5225.

The photometric centre of the luminaire was taken as the geometric centre of the front face of the louvre.

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

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

The Light Output Ratio of the luminaire (LORL) was determined in accordance with BS5225 at 25°C.

Lamps used for test were provided by the customer.

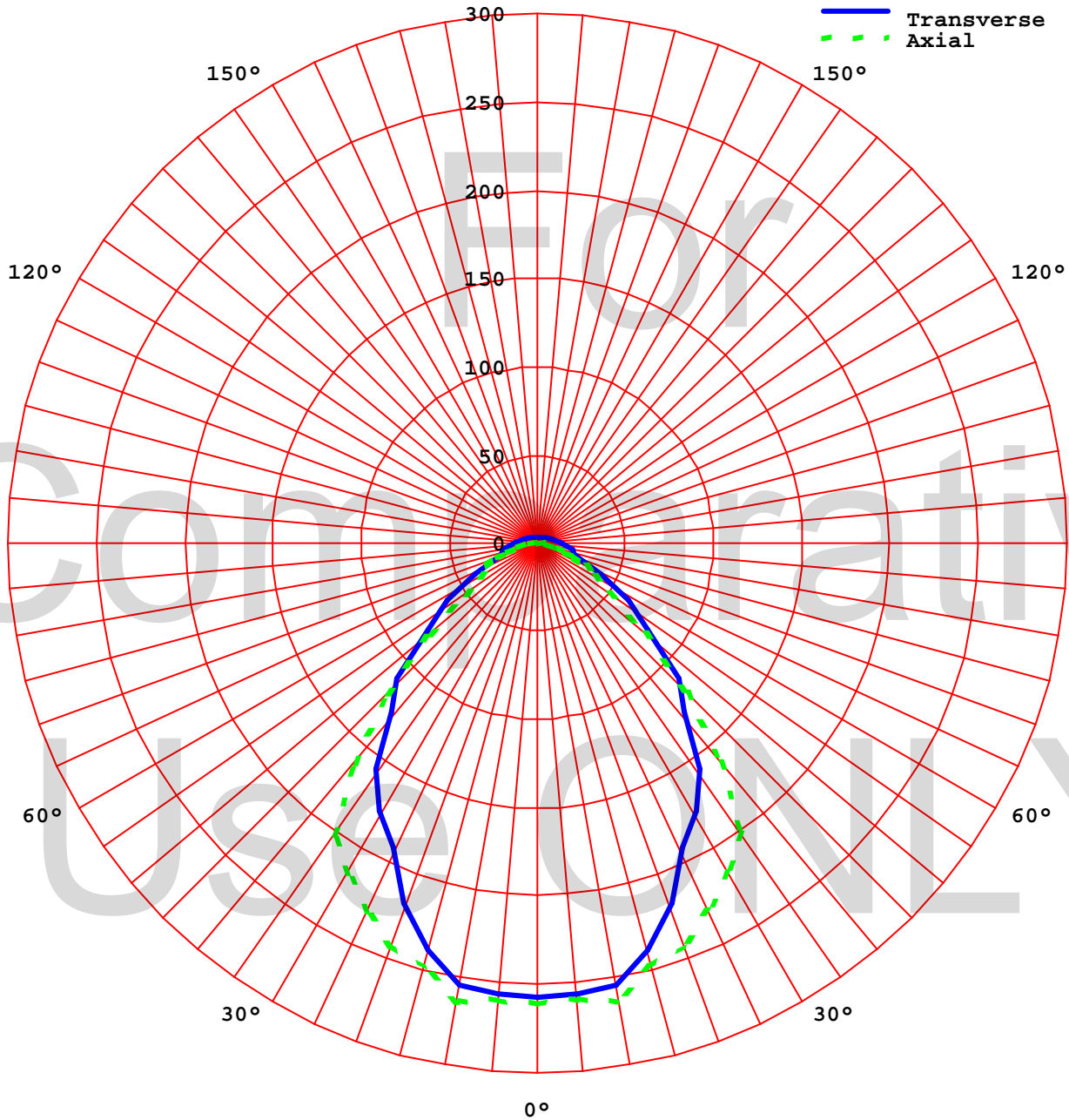
No measurement of the absolute lumen output of the lamps or the luminaire was made. Lumen output figures for the lamps mentioned in this report are those quoted by the manufacturer.

No measurement of the ballast factor of the control gear was made, in the absence of other information it is presumed that the ballast factor of the control gear fitted is unity.

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Lamp lumen output	54 W T5 4450lm
No. of lamps in luminaire	1

Average Principal Axes Luminous Intensities (cd/klm)



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No. of lamps in luminaire	1

Average Luminous Intensities (cd/Klm)

Angle	Transverse plane	Axial plane
0°	260.30	260.30
5°	259.09	259.92
10°	257.91	263.17
15°	241.61	248.73
20°	221.39	243.02
25°	193.41	230.18
30°	178.47	215.23
35°	159.91	201.11
40°	128.61	161.76
45°	112.19	120.61
50°	80.61	79.47
55°	61.91	49.24
60°	41.89	37.53
65°	22.51	31.04
70°	21.20	23.05
75°	12.60	18.12
80°	8.31	10.52
85°	4.22	5.39
90°	0.00	0.00

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 No. of lamps in luminaire 1

Light Output Ratios Up 0.00
 Down 0.49
 Total 0.49

Spacing to Height Ratios SHR NOM 1.25
 SHR MAX 1.35
 SHR MAX TRANS 1.44

Utilisation Factors UF(F) Standard Presentation SHR NOM = 1.25

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	.34	.38	.41	.44	.46	.48	.50	.51	.53			
	.30		.30	.35	.38	.41	.44	.46	.48	.50	.51			
	.10		.28	.33	.36	.39	.42	.44	.46	.48	.50			
.50	.50	.20	.33	.37	.40	.42	.45	.47	.48	.50	.51			
	.30		.30	.35	.38	.40	.43	.45	.46	.48	.49			
	.10		.28	.32	.36	.38	.41	.43	.45	.47	.48			
.30	.50	.20	.32	.36	.39	.41	.44	.45	.46	.48	.49			
	.30		.30	.34	.37	.39	.42	.44	.45	.47	.48			
	.10		.28	.32	.35	.37	.40	.42	.44	.46	.47			
.00	.00	.00	.27	.31	.34	.36	.39	.41	.42	.44	.45			
BZ Class			2	2	2	2	2	2	2	2	3			
CIE Flux code			63 / 91 / 98 / 100 / 49											
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			0.42	0.51	0.58	0.65	0.70	0.77	0.82	0.85	0.88	0.90	0.95	0.97
CIE class			3 /	3 /	3 /	3 /	3 /	2 /	2 /	2 /	2 /	3 /	3 /	3

Flux Fraction Ratio 0.00
 DIN Class 0.49 A

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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Lamp lumen output	54 W T5 4450lm
No. of lamps in luminaire	1

Angle

Aspect Factors

	Parallel plane	Perpendicular plane
0°	0.000	0.000
5°	0.087	0.004
10°	0.174	0.015
15°	0.258	0.034
20°	0.336	0.059
25°	0.410	0.089
30°	0.476	0.123
35°	0.535	0.161
40°	0.583	0.198
45°	0.618	0.230
50°	0.640	0.255
55°	0.654	0.272
60°	0.661	0.284
65°	0.667	0.294
70°	0.670	0.303
75°	0.672	0.309
80°	0.673	0.314
85°	0.674	0.316
90°	0.674	0.317

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Lamp lumen output	54 W T5 4450lm
No. of lamps in luminaire	1

Zonal Flux Calculations

Angles	Individual	Cumulative
0° - 5°	1.3%	1.3%
5° - 10°	3.8%	5.1%
10° - 15°	6.1%	11.2%
15° - 20°	7.9%	19.1%
20° - 25°	9.3%	28.4%
25° - 30°	10.4%	38.8%
30° - 35°	10.9%	49.7%
35° - 40°	10.8%	60.5%
40° - 45°	9.9%	70.4%
45° - 50°	8.5%	78.9%
50° - 55°	6.6%	85.5%
55° - 60°	4.8%	90.2%
60° - 65°	3.3%	93.6%
65° - 70°	2.4%	96.0%
70° - 75°	1.8%	97.8%
75° - 80°	1.3%	99.0%
80° - 85°	0.7%	99.8%
85° - 90°	0.2%	100.0%
90° - 95°	0.0%	100.0%
95° - 100°	0.0%	100.0%
100° - 105°	0.0%	100.0%
105° - 110°	0.0%	100.0%
110° - 115°	0.0%	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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 Polycarbonate
 White
 Single lamp
 Lamp description 54 W T5
 Lamp lumen output 4450lm
 No. of lamps in luminaire 1

Averaged Luminance Values (Cd/m²)

Elevation(°)	Azimuth(°)						
	0°	15°	30°	45°	60°	75°	90°
45°	7734	7933	8052	8407	8403	8023	8315
50°	6113	6543	7320	7356	6968	6066	6027
55°	5262	5678	6122	5664	4746	4103	4184
60°	4084	4220	4623	4195	3397	3550	3659
65°	2596	2726	3112	3184	3056	3466	3581
70°	3021	2617	2557	2696	3073	2910	3285
75°	2372	2561	2603	2646	2588	2853	3413
80°	2333	2380	2428	2379	2587	2551	2952
85°	2362	2163	1855	2609	2815	2950	3017
	90°	105°	120°	135°	150°	165°	180°
45°	8315	8023	8403	8407	8052	7933	7734
50°	6027	6066	6968	7356	7320	6543	6113
55°	4184	4103	4746	5664	6122	5678	5262
60°	3659	3550	3397	4195	4623	4220	4084
65°	3581	3466	3056	3184	3112	2726	2596
70°	3285	2910	3073	2696	2557	2617	3021
75°	3413	2853	2588	2646	2603	2561	2372
80°	2952	2551	2587	2379	2428	2380	2333
85°	3017	2950	2815	2609	1855	2163	2362
	180°	195°	210°	225°	240°	255°	270°
45°	7734	7933	8052	8407	8403	8023	8315
50°	6113	6543	7320	7356	6968	6066	6027
55°	5262	5678	6122	5664	4746	4103	4184
60°	4084	4220	4623	4195	3397	3550	3659
65°	2596	2726	3112	3184	3056	3466	3581
70°	3021	2617	2557	2696	3073	2910	3285
75°	2372	2561	2603	2646	2588	2853	3413
80°	2333	2380	2428	2379	2587	2551	2952
85°	2362	2163	1855	2609	2815	2950	3017
	270°	285°	300°	315°	330°	345°	0°
45°	8315	8023	8403	8407	8052	7933	7734
50°	6027	6066	6968	7356	7320	6543	6113
55°	4184	4103	4746	5664	6122	5678	5262
60°	3659	3550	3397	4195	4623	4220	4084
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70°	3285	2910	3073	2696	2557	2617	3021
75°	3413	2853	2588	2646	2603	2561	2372
80°	2952	2551	2587	2379	2428	2380	2333
85°	3017	2950	2815	2609	1855	2163	2362

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 Luminaire catalog No. HC80T5-PC-1200-W
 Luminaire description Hi cell Louvre
 Polycarbonate
 White
 Single lamp
 Lamp description 54 W T5
 Lamp lumen output 4450lm
 No. of lamps in luminaire 1

Non averaged Luminance Values (Cd/m²)

Elevation(°)	Azimuth(°)						
	0°	15°	30°	45°	60°	75°	90°
45°	7617	7704	8296	8375	7832	7796	8129
50°	6148	6092	7097	7691	7194	5938	5796
55°	5363	5629	5507	6061	4771	4402	4103
60°	4257	4202	4514	4240	3514	3351	3476
65°	2212	3130	3325	2929	2681	3386	3859
70°	2986	2786	2324	3308	2791	2875	3163
75°	2491	2300	2686	2887	2619	3192	3361
80°	2172	2523	2074	2393	2743	2709	2848
85°	1935	2857	2131	3022	2851	3238	3250
	90°	105°	120°	135°	150°	165°	180°
45°	8129	7843	9021	8652	7742	7077	7851
50°	5796	6378	6967	7540	7342	6622	6078
55°	4103	4081	4562	5378	6231	5230	5160
60°	3476	3328	3275	4112	4683	4366	3911
65°	3859	3550	2627	3528	2908	2441	2981
70°	3163	3039	2554	2494	2926	2531	3056
75°	3361	2566	2538	2984	2779	2533	2254
80°	2848	2333	2509	2358	2634	2381	2493
85°	3250	2695	3360	2674	1392	2768	2790
	180°	195°	210°	225°	240°	255°	270°
45°	7851	8276	8016	8242	8266	8181	8500
50°	6078	6797	7446	6832	6858	5959	6258
55°	5160	5731	6435	5794	4931	4095	4265
60°	3911	3928	4719	4596	3409	3795	3841
65°	2981	2695	3293	3133	3322	2998	3303
70°	3056	2439	2850	2527	3218	2572	3407
75°	2254	2603	2648	2351	2528	2881	3465
80°	2493	2372	2643	2128	2241	2832	3057
85°	2790	1453	2249	2474	2657	2827	2783
	270°	285°	300°	315°	330°	345°	0°
45°	8500	8272	8493	8359	8155	8675	7617
50°	6258	5989	6854	7361	7395	6661	6148
55°	4265	3836	4720	5422	6316	6121	5363
60°	3841	3727	3388	3832	4577	4384	4257
65°	3303	3930	3593	3146	2922	2638	2212
70°	3407	3154	3729	2455	2128	2713	2986
75°	3465	2773	2665	2363	2300	2808	2491
80°	3057	2329	2855	2638	2360	2243	2172
85°	2783	3040	2393	2269	1647	1576	1935

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Lamp description	Single lamp
Lamp lumen output	54 W T5 4450lm
No. of lamps in luminaire	1

Maximum Non averaged Luminance Values (Cd/m²)

Elevation(°)

Maximum Azimuth Angle

45°	9021	120°
50°	7691	45°
55°	6435	210°
60°	4719	210°
65°	3930	285°
70°	3729	300°
75°	3465	270°
80°	3057	270°
85°	3360	120°

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 No. of lamps in luminaire 1

CIBSE LG3 (2001) Luminance Information

Permitted Usage according to Screen Type and Luminance Limit Angle	Limiting luminance (Cd/m ²)	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

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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

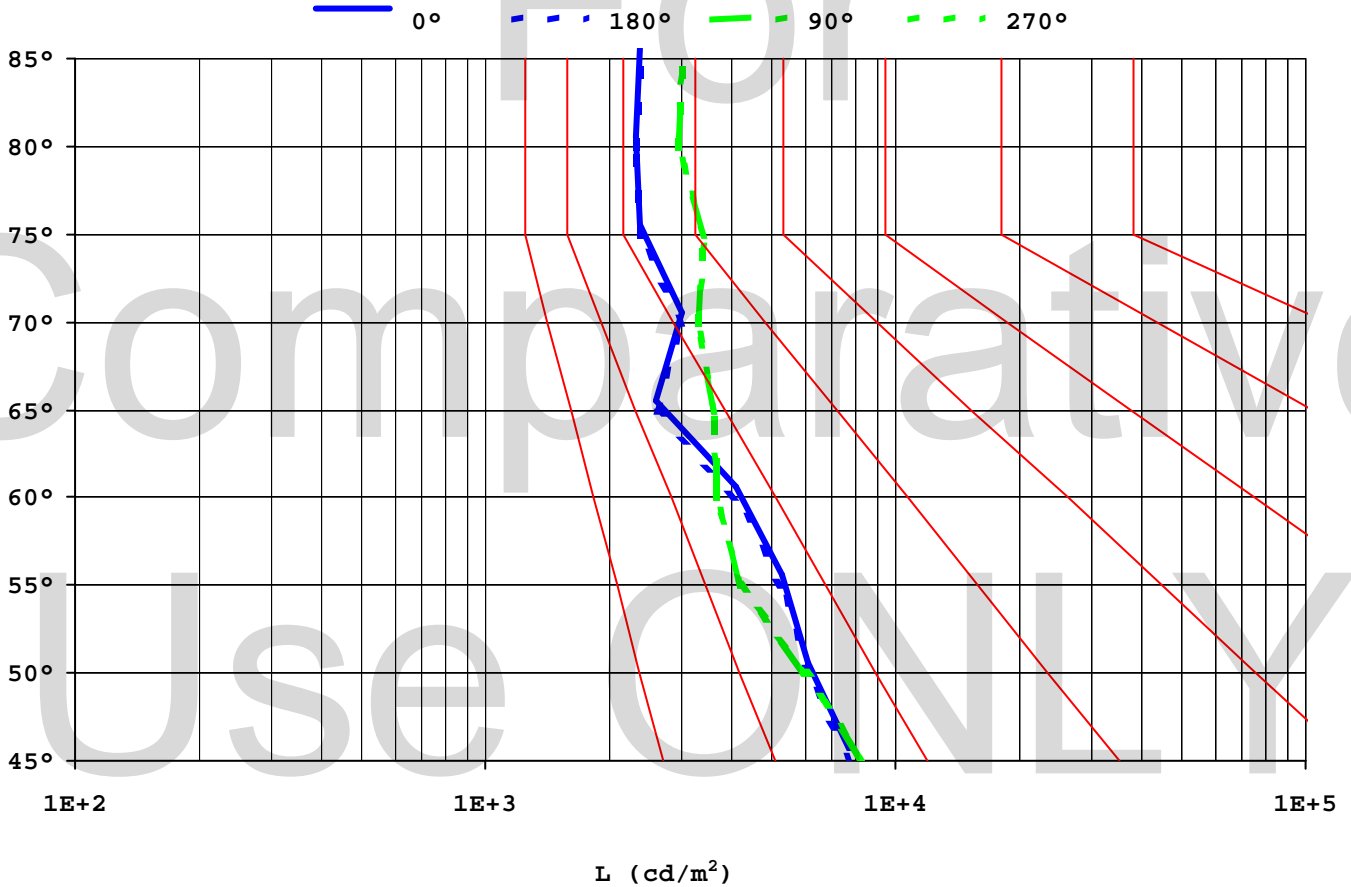
Room dimension	Viewed crosswise					Viewed endwise				
X Y	0°					90°				
2H 2H	12.0	13.8	12.4	14.1	14.5	10.3	12.1	10.8	12.5	12.9
3H	13.1	14.7	13.6	15.1	15.6	12.3	13.9	12.8	14.4	14.8
4H	13.6	15.1	14.1	15.6	16.0	13.3	14.8	13.8	15.2	15.7
6H	14.2	15.6	14.7	16.0	16.5	14.2	15.5	14.7	16.0	16.5
8H	14.4	15.7	14.9	16.2	16.7	14.5	15.8	15.0	16.3	16.8
12H	14.6	15.9	15.1	16.3	16.9	14.8	16.1	15.3	16.5	17.1
4H 2H	12.4	13.9	12.9	14.3	14.8	11.0	12.5	11.5	12.9	13.4
3H	13.8	15.1	14.3	15.5	16.1	13.3	14.6	13.8	15.1	15.6
4H	14.6	15.7	15.1	16.2	16.8	14.5	15.6	15.0	16.1	16.6
6H	15.3	16.3	15.9	16.8	17.4	15.4	16.4	16.0	17.0	17.5
8H	15.6	16.5	16.2	17.1	17.7	15.9	16.8	16.5	17.4	18.0
12H	15.9	16.8	16.5	17.3	17.9	16.3	17.2	16.9	17.7	18.4
8H 4H	15.0	15.9	15.6	16.5	17.1	14.9	15.8	15.5	16.3	16.9
6H	15.9	16.6	16.5	17.2	17.9	16.0	16.8	16.7	17.4	18.0
8H	16.4	17.1	17.0	17.7	18.3	16.7	17.4	17.4	18.0	18.6
12H	16.8	17.4	17.5	18.0	18.6	17.3	17.9	18.0	18.5	19.1
12H 4H	15.1	16.0	15.7	16.5	17.2	15.0	15.8	15.6	16.4	17.0
6H	16.1	16.8	16.8	17.4	18.0	16.3	16.9	16.9	17.6	18.2
8H	16.6	17.2	17.3	17.8	18.5	16.9	17.5	17.6	18.1	18.8

Calculated in accordance with CIBSE Technical Memorandum No. 10 1985

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 White
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 Lamp description 54 W T5
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 No. of lamps in luminaire 1

CIE Glare Limiting (Soellnor) Diagram

Glare Rating	Quality 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



Job / Report / Date

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Customer

SLP

Luminaire Range

Hi Cell

Luminaire catalog No.

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Luminaire description

Hi cell Louvre

Polycarbonate

White

Single lamp

Lamp description

54 W T5

Lamp lumen output

4450lm

No. of lamps in luminaire

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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 No. of lamps in luminaire 1

Quick Design Table

Based on: reflectances of Ceiling = 0.5
 Wall = 0.5
 Floor = 0.2
 Room Index = 2.00
 lamp output = 4450 lumens
 ballast lumen factor = 1.00

To achieve an Illuminance of 100 lux

Surface Area (m ²)	20	30	40	50	80	100	200	300	500
No. of luminaires	1.0	1.5	2.0	2.5	4.0	5.0	10.0	15.0	25.0

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