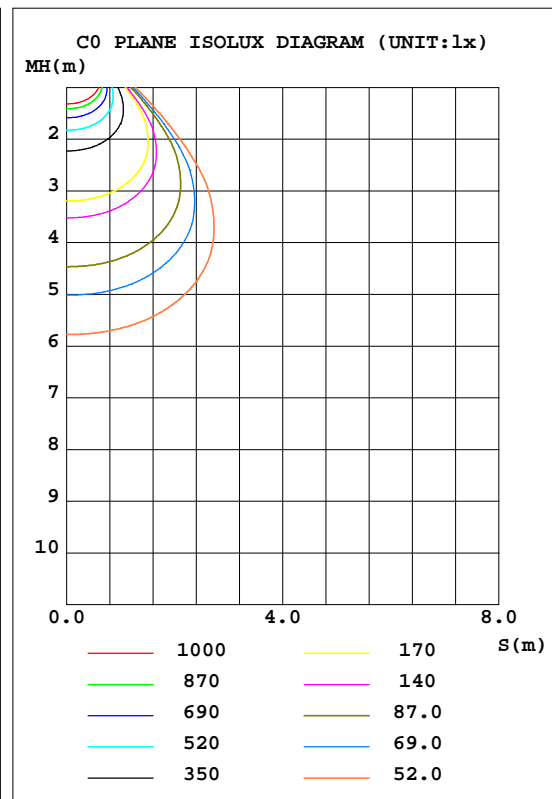
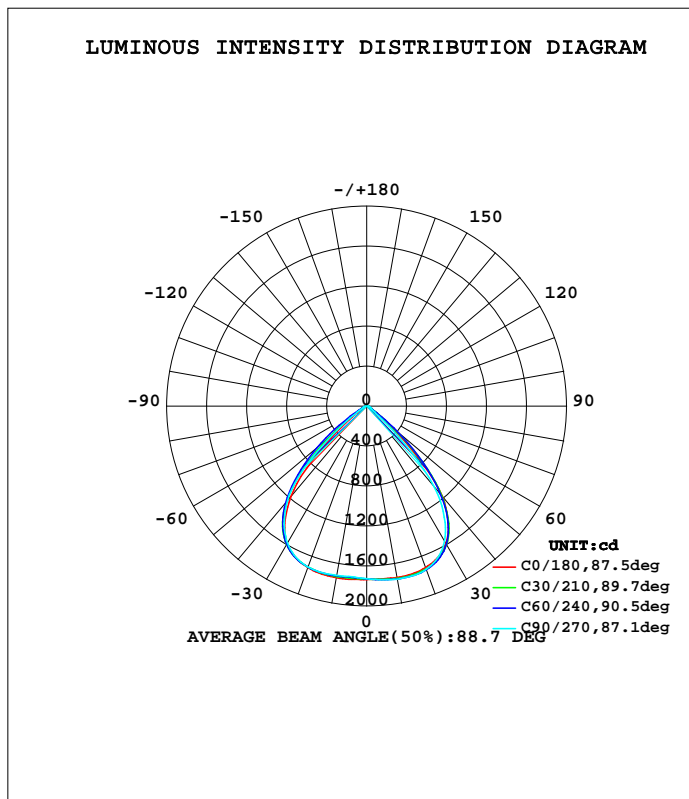


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:110.0V I:0.2230A P:24.00W PF:0.9790 Lamp Flux:3199.64x1 lm		
NAME: DL96-8-25W	TYPE:25W	WEIGHT:
DIM.:	SPEC.:4000K	SERIAL No.:1
MFR.:	SUR.:0.13X0.13	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 133.32 lm/W			
MODEL	DL96-8-25W	I _{max} (cd)	1760	S/MH(C0/180)	1.27
NOMINAL POWER(W)	25	LOR(%)	100.0	S/MH(C90/270)	1.30
RATED VOLTAGE(V)	110	TOTAL FLUX(lm)	3199.6	η UP, DN(C0-180)	0.0, 52.0
NOMINAL FLUX(lm)	3199.64	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0, 48.0
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	110.0	η down(%)	100.0	CIBSE SHR MAX	1.35



C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2018-08-15

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.276
 Humidity:65.0%
 Test Distance:9.600m [K=1.0000]
 Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	\$lum,lamp
10	1742	1729	1719	1717	1741	1752	1758	1748	0- 10	165.4	165.4	5.17,5.17
20	1720	1715	1714	1716	1720	1739	1739	1734	10- 20	492.2	657.6	20.6,20.6
30	1591	1601	1583	1609	1587	1596	1560	1583	20- 30	772.5	1430	44.7,44.7
40	1176	1253	1233	1268	1177	1158	1049	1154	30- 40	887.3	2317	72.4,72.4
50	332.3	583.5	454.5	594.2	301.2	397.6	196.3	410.4	40- 50	629.9	2947	92.1,92.1
60	63.29	104.6	73.10	95.92	54.59	62.58	52.22	70.47	50- 60	182.3	3130	97.8,97.8
70	33.09	35.67	33.33	31.46	26.92	27.32	26.94	30.83	60- 70	46.91	3177	99.3,99.3
80	10.18	11.60	9.867	8.783	6.520	6.356	6.847	8.504	70- 80	19.97	3197	99.9,99.9
90	0	0	0	0	0	0	0	0	80- 90	3.134	3200	100,100
100									90-100			
110									100-110			
120									110-120			
130									120-130			
140									130-140			
150									140-150			
160									150-160			
170									160-170			
180									170-180			
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

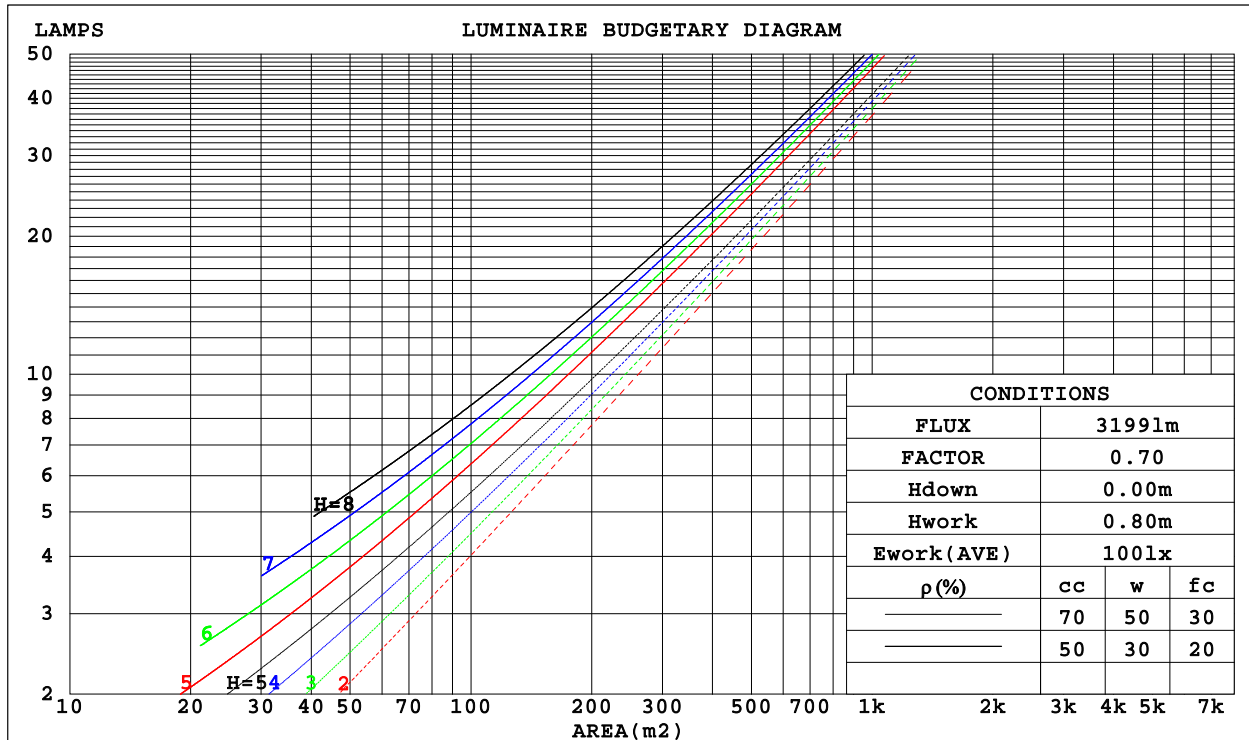
C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2018-08-15

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.276
 Humidity:65.0%
 Test Distance:9.600m [K=1.0000]
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:110.0V I:0.2230A P:24.00W PF:0.9790 Lamp Flux:3199.64x1 lm		
NAME: DL96-8-25W	TYPE:25W	WEIGHT:
DIM.:	SPEC.:4000K	SERIAL No.:1
MFR.:	SUR.:0.13X0.13	PROTECTION ANGLE:

ρ_{cc}	80%			70%			50%			30%			10%			0
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ_{fc}	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Coefficients of Utilization(CU)									
0.0	1.19	1.19	1.19	1.16	1.16	1.16	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	1.00
1.0	1.09	1.06	1.03	1.07	1.04	1.02	1.03	1.00	.98	.99	.97	.95	.95	.94	.93	.91
2.0	.99	.94	.90	.97	.93	.89	.94	.90	.87	.91	.88	.85	.88	.86	.83	.82
3.0	.90	.84	.79	.89	.83	.79	.86	.81	.77	.84	.79	.76	.81	.78	.75	.73
4.0	.82	.76	.70	.81	.75	.70	.79	.73	.69	.77	.72	.68	.75	.71	.67	.66
5.0	.75	.68	.63	.74	.68	.63	.72	.67	.62	.71	.65	.61	.69	.64	.61	.59
6.0	.69	.62	.57	.68	.61	.56	.67	.61	.56	.65	.60	.56	.64	.59	.55	.53
7.0	.64	.56	.51	.63	.56	.51	.61	.55	.51	.60	.55	.50	.59	.54	.50	.48
8.0	.59	.51	.47	.58	.51	.46	.57	.51	.46	.56	.50	.46	.55	.50	.46	.44
9.0	.54	.47	.42	.54	.47	.42	.53	.47	.42	.52	.46	.42	.51	.46	.42	.40
10.0	.50	.44	.39	.50	.43	.39	.49	.43	.39	.48	.43	.39	.47	.42	.38	.37



C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2018-08-15

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.276
 Humidity:65.0%
 Test Distance:9.600m [K=1.0000]
 Remarks:

WEC AND CCEC

Test:U:110.0V I:0.2230A P:24.00W PF:0.9790 Lamp Flux:3199.64x1 lm		
NAME: DL96-8-25W	TYPE:25W	WEIGHT:
DIM.:	SPEC.:4000K	SERIAL No.:1
MFR.:	SUR.:0.13X0.13	PROTECTION ANGLE:

pcc	80%			70%			50%			30%			10%			0
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.214	.121	.038	.207	.118	.037	.194	.111	.036	.182	.105	.034	.171	.099	.032	
2.0	.208	.114	.035	.203	.112	.034	.192	.107	.033	.182	.102	.032	.172	.097	.031	
3.0	.200	.106	.032	.195	.104	.031	.185	.101	.031	.177	.097	.030	.169	.093	.029	
4.0	.191	.099	.029	.186	.098	.029	.178	.094	.028	.170	.091	.028	.163	.089	.027	
5.0	.182	.093	.027	.178	.091	.027	.170	.089	.026	.164	.086	.026	.157	.084	.025	
6.0	.173	.087	.025	.169	.086	.025	.163	.083	.024	.157	.081	.024	.151	.080	.024	
7.0	.165	.081	.023	.161	.080	.023	.156	.079	.023	.150	.077	.022	.145	.075	.022	
8.0	.157	.077	.022	.154	.076	.021	.149	.074	.021	.144	.073	.021	.139	.071	.021	
9.0	.149	.072	.020	.147	.072	.020	.142	.070	.020	.138	.069	.020	.133	.068	.020	
10.0	.142	.068	.019	.140	.068	.019	.136	.067	.019	.132	.065	.019	.128	.064	.018	

pcc	80%			70%			50%			30%			10%			0
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Ceiling Cavity Exitance Coefficients(CCEC)									
0.0	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020	
1.0	.174	.157	.142	.149	.135	.122	.102	.093	.085	.058	.054	.049	.019	.017	.016	
2.0	.161	.132	.108	.138	.114	.093	.095	.079	.065	.055	.046	.038	.017	.015	.012	
3.0	.151	.114	.084	.129	.098	.073	.089	.068	.051	.051	.040	.030	.016	.013	.010	
4.0	.142	.100	.067	.122	.086	.058	.084	.060	.041	.049	.035	.024	.016	.011	.008	
5.0	.135	.089	.054	.116	.077	.047	.080	.054	.033	.046	.031	.020	.015	.010	.007	
6.0	.128	.080	.045	.110	.069	.039	.076	.048	.028	.044	.028	.016	.014	.009	.005	
7.0	.122	.073	.038	.105	.063	.033	.073	.044	.023	.042	.026	.014	.014	.009	.005	
8.0	.117	.067	.032	.101	.058	.028	.070	.041	.020	.041	.024	.012	.013	.008	.004	
9.0	.112	.062	.028	.096	.054	.025	.067	.038	.017	.039	.022	.010	.013	.007	.003	
10.0	.107	.058	.025	.092	.050	.022	.064	.035	.015	.037	.021	.009	.012	.007	.003	

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2018-08-15

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.276
 Humidity:65.0%
 Test Distance:9.600m [K=1.0000]
 Remarks:

Uncorrected UGR Table

Test:U:110.0V I:0.2230A P:24.00W PF:0.9790 Lamp Flux:3199.64x1 lm										
NAME: DL96-8-25W					TYPE:25W			WEIGHT:		
DIM.:					SPEC.:4000K			SERIAL No.:1		
MFR.:					SUR.:0.13X0.13			PROTECTION ANGLE:		
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	Viewed crosswise					Viewed endwise				
x = 2H y = 2H	24.1	25.3	24.4	25.5	25.7	24.8	26.0	25.0	26.2	26.4
3H	24.0	25.1	24.3	25.3	25.5	24.7	25.8	24.9	26.0	26.2
4H	23.9	25.0	24.2	25.2	25.4	24.6	25.6	24.9	25.9	26.1
6H	23.9	24.8	24.2	25.1	25.3	24.5	25.5	24.8	25.7	26.0
8H	23.8	24.7	24.1	25.0	25.3	24.5	25.4	24.8	25.7	25.9
12H	23.8	24.6	24.1	24.9	25.2	24.4	25.3	24.8	25.6	25.9
4H 2H	24.0	25.0	24.3	25.2	25.5	24.6	25.6	24.9	25.9	26.1
3H	23.9	24.8	24.2	25.0	25.3	24.5	25.4	24.8	25.7	25.9
4H	23.8	24.6	24.2	24.9	25.2	24.4	25.2	24.8	25.5	25.9
6H	23.8	24.5	24.2	24.8	25.2	24.4	25.1	24.8	25.4	25.8
8H	23.7	24.4	24.1	24.7	25.1	24.3	25.0	24.7	25.3	25.7
12H	23.7	24.3	24.1	24.7	25.0	24.3	24.9	24.7	25.3	25.7
8H 4H	23.7	24.4	24.1	24.7	25.1	24.3	25.0	24.7	25.3	25.7
6H	23.7	24.2	24.1	24.6	25.0	24.3	24.8	24.7	25.2	25.6
8H	23.6	24.1	24.1	24.5	25.0	24.2	24.7	24.7	25.1	25.6
12H	23.6	24.0	24.1	24.4	24.9	24.2	24.6	24.7	25.0	25.5
12H 4H	23.7	24.3	24.1	24.6	25.0	24.3	24.9	24.7	25.2	25.6
6H	23.6	24.1	24.1	24.5	25.0	24.2	24.7	24.7	25.1	25.6
8H	23.6	24.0	24.1	24.4	24.9	24.2	24.6	24.7	25.0	25.5
Variations with the observer position at spacings:										
S = 1.0H	+ 2.4 / - 6.9					+ 2.4 / - 6.1				
1.5H	+ 2.1 / - 4.9					+ 1.5 / - 3.6				
2.0H	+ 5.1 / - 6.7					+ 4.7 / - 7.6				

CIE Pub.117 Corrected 3200 lm Total Lamp Luminous Flux.(8log(F/F0) = 4.0)

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2018-08-15

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.276
 Humidity:65.0%
 Test Distance:9.600m [K=1.0000]
 Remarks:

UTILIZATION FACTORS TABLE

Test:U:110.0V I:0.2230A P:24.00W PF:0.9790 Lamp Flux:3199.64x1 lm		
NAME: DL96-8-25W	TYPE:25W	WEIGHT:
DIM.:	SPEC.:4000K	SERIAL No.:1
MFR.:	SUR.:0.13X0.13	PROTECTION ANGLE:

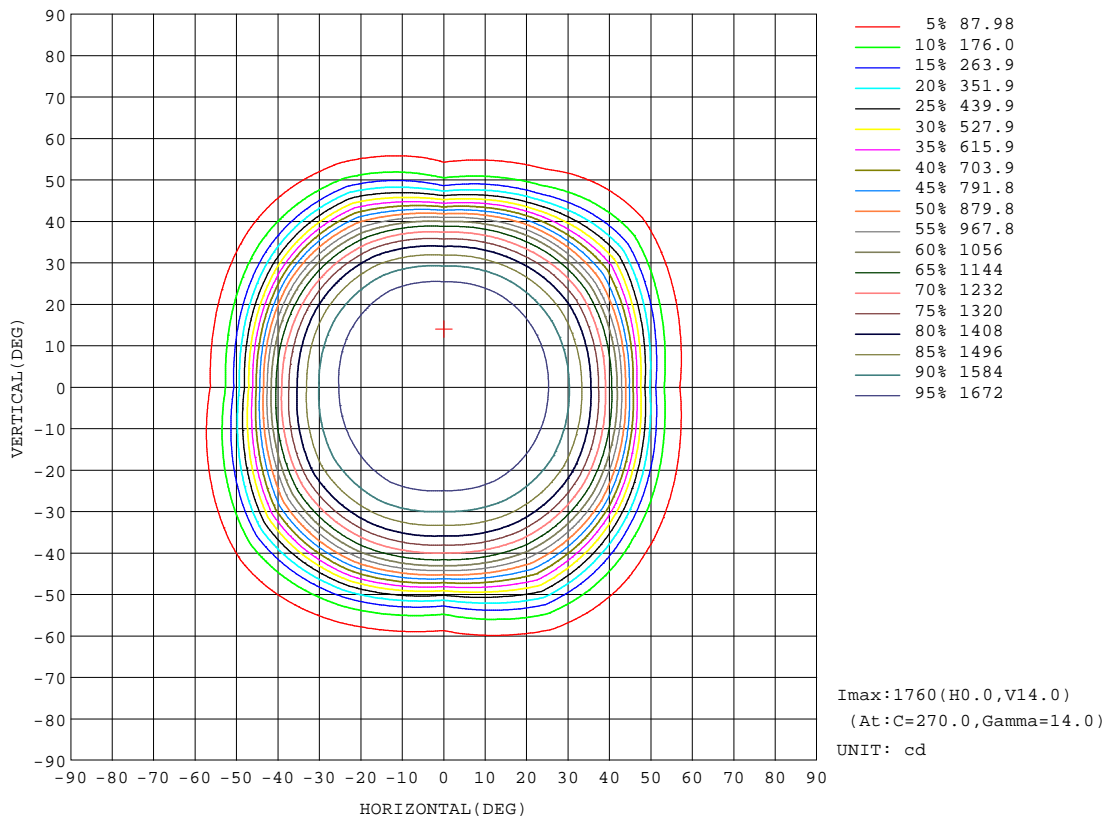
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) k(RI) x RCR = 5									
k = 0.60	74	65	60	73	65	60	72	65	60	55
0.80	83	75	70	83	75	70	81	74	69	64
1.00	91	83	78	90	83	78	88	83	77	72
1.25	96	89	85	95	89	84	93	88	84	78
1.50	100	94	89	99	93	89	96	91	88	82
2.00	105	99	95	103	98	94	100	96	93	87
2.50	107	102	98	105	101	97	102	98	95	89
3.00	109	105	101	107	103	100	104	100	98	91
4.00	111	108	105	109	106	103	105	103	101	93
5.00	113	110	107	111	108	106	106	104	102	94
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNOM = 1.25			

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2018-08-15

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.276
 Humidity:65.0%
 Test Distance:9.600m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

Test:U:110.0V I:0.2230A P:24.00W PF:0.9790 Lamp Flux:3199.64x1 lm		
NAME: DL96-8-25W	TYPE:25W	WEIGHT:
DIM.:	SPEC.:4000K	SERIAL No.:1
MFR.:	SUR.:0.13X0.13	PROTECTION ANGLE:



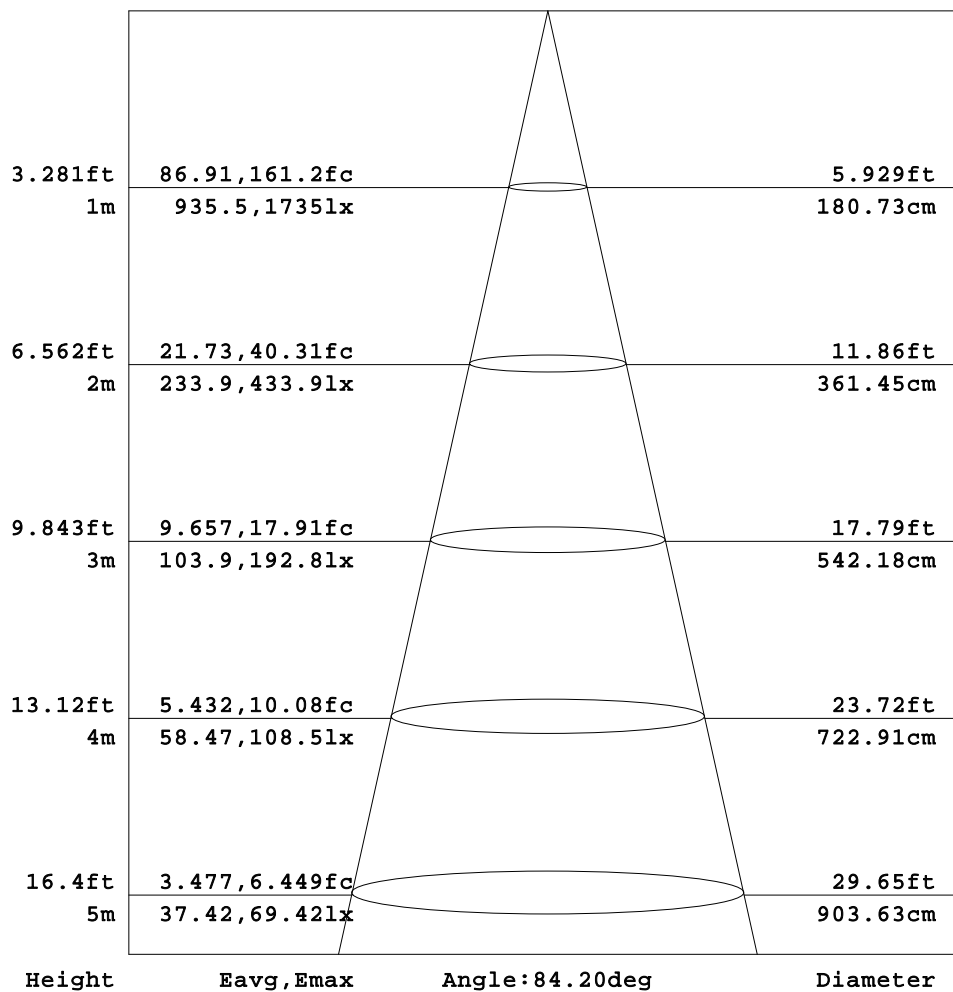
C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2018-08-15

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.276
Humidity:65.0%
Test Distance:9.600m [K=1.0000]
Remarks:

AAI Figure

Test:U:110.0V I:0.2230A P:24.00W PF:0.9790 Lamp Flux:3199.64x1 lm		
NAME: DL96-8-25W	TYPE:25W	WEIGHT:
DIM.:	SPEC.:4000K	SERIAL No.:1
MFR.:	SUR.:0.13X0.13	PROTECTION ANGLE:

Flux out:2556 lm



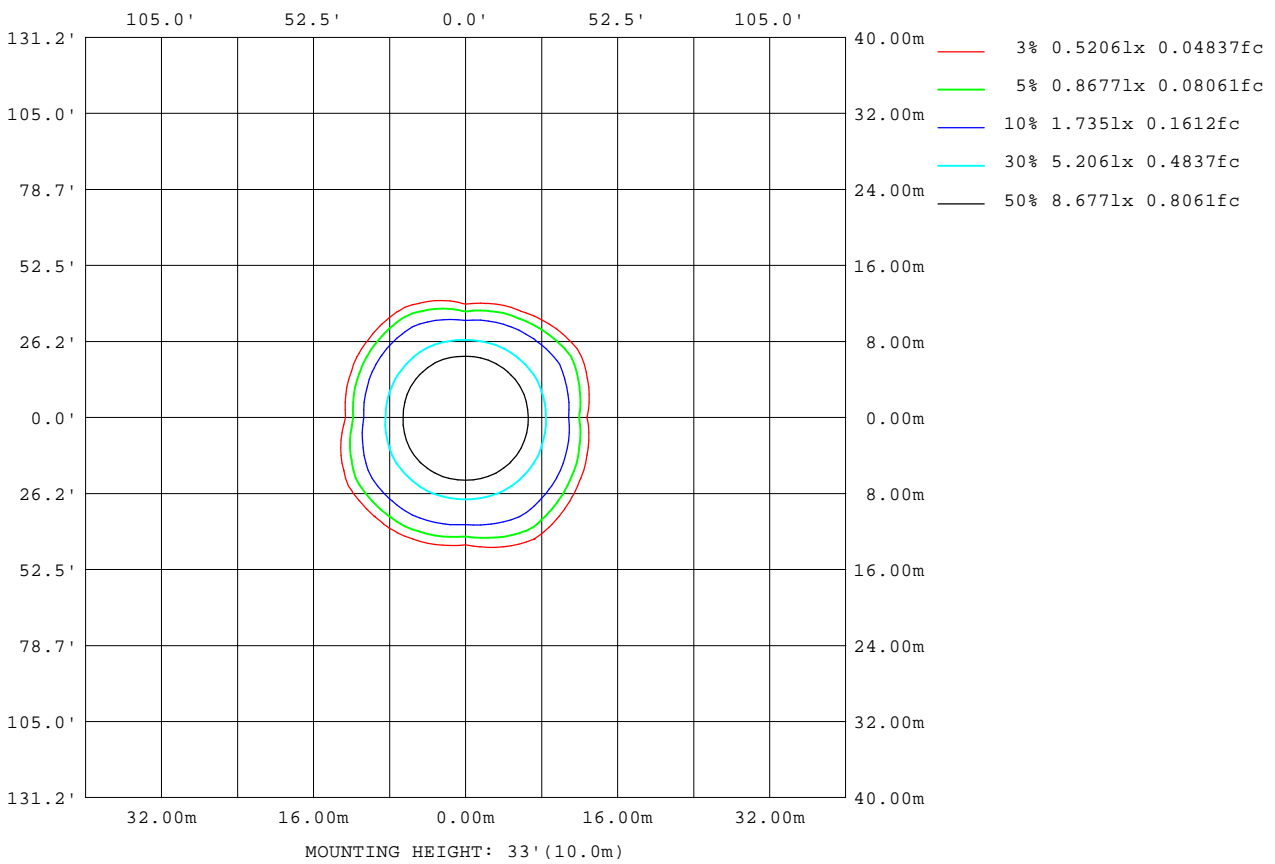
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2018-08-15

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.276
 Humidity:65.0%
 Test Distance:9.600m [K=1.0000]
 Remarks:

ISOLUX DIAGRAM

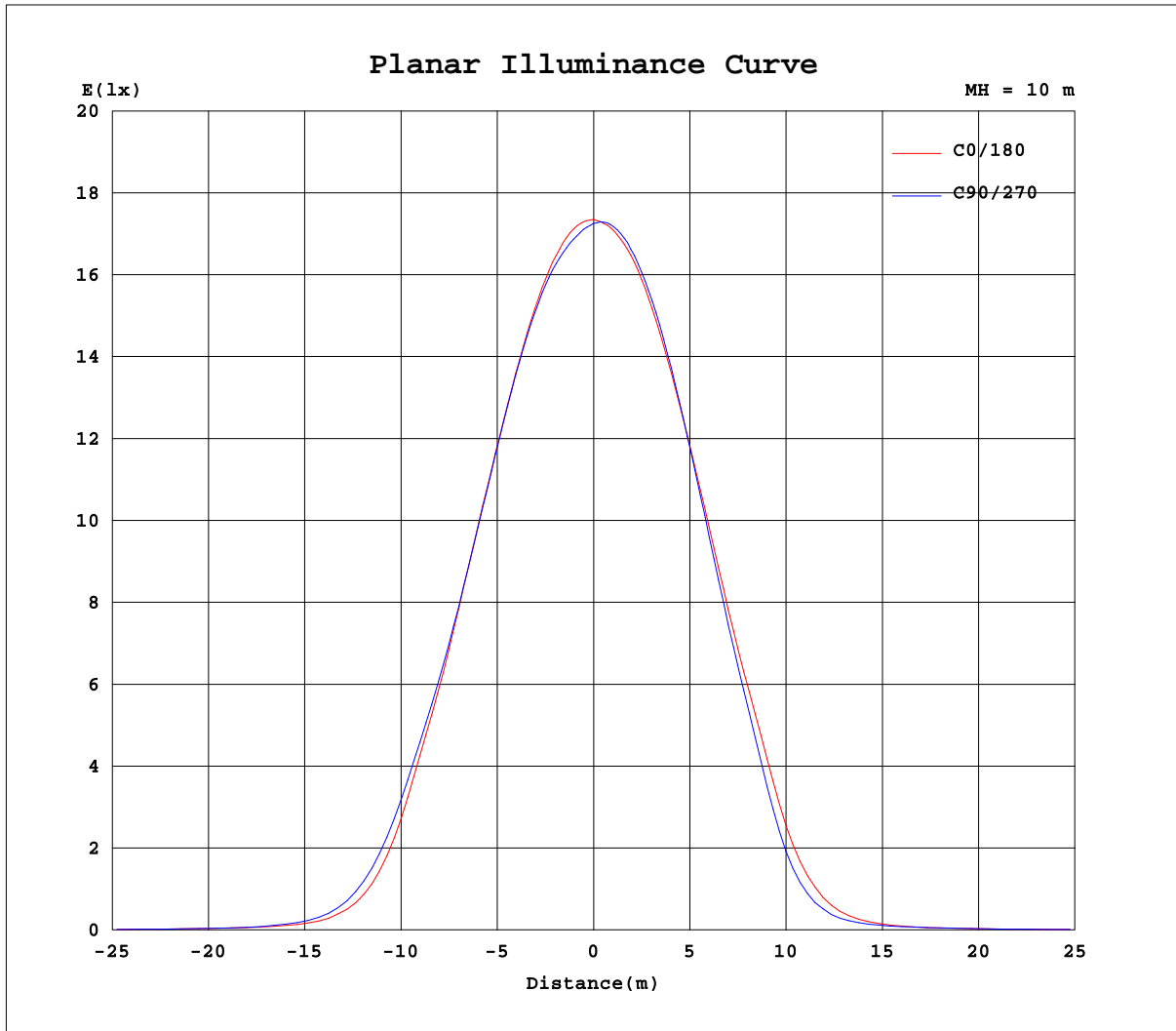
Test:U:110.0V I:0.2230A P:24.00W PF:0.9790 Lamp Flux:3199.64x1 lm		
NAME: DL96-8-25W	TYPE:25W	WEIGHT:
DIM.:	SPEC.:4000K	SERIAL No.:1
MFR.:	SUR.:0.13X0.13	PROTECTION ANGLE:



C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2018-08-15

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.276
 Humidity:65.0%
 Test Distance:9.600m [K=1.0000]
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DAMIN
 Test Date: 2018-08-15

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.276
 Humidity: 65.0%
 Test Distance: 9.600m [K=1.0000]
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:110.0V I:0.2230A P:24.00W PF:0.9790 Lamp Flux:3199.64x1 lm		
NAME: DL96-8-25W	TYPE:25W	WEIGHT:
DIM.:	SPEC.:4000K	SERIAL No.:1
MFR.:	SUR.:0.13X0.13	PROTECTION ANGLE:

Table--1

UNIT: cd

C(DEG) γ (DEG)	0	30	60	90	120	150	180	210	240	270	300	330						
0	1735	1731	1729	1726	1724	1721	1735	1731	1729	1726	1724	1721						
5	1739	1730	1721	1715	1713	1716	1735	1739	1744	1744	1739	1733						
10	1742	1732	1725	1719	1716	1718	1741	1749	1755	1758	1753	1743						
15	1740	1730	1728	1725	1725	1721	1739	1751	1759	1758	1755	1744						
20	1720	1714	1715	1714	1718	1713	1720	1734	1743	1739	1739	1728						
25	1675	1676	1679	1671	1684	1677	1675	1688	1695	1680	1686	1681						
30	1591	1602	1599	1583	1608	1610	1587	1599	1594	1560	1578	1589						
35	1430	1470	1466	1440	1474	1484	1423	1434	1422	1356	1392	1437						
40	1176	1243	1262	1233	1268	1269	1177	1166	1150	1049	1119	1189						
45	772	928	977	903	979	968	724	793	797	545	722	853						
50	332	514	653	454	590	599	301	380	415	196	312	509						
55	121	207	337	169	246	271	110	138	152	79.2	111	216						
60	63.3	83.6	126	73.1	92.0	99.8	54.6	59.9	65.2	52.2	59.4	81.5						
65	45.1	49.1	56.8	45.6	46.7	46.6	39.0	39.6	40.6	39.1	42.0	46.9						
70	33.1	35.5	35.8	33.3	32.6	30.4	26.9	27.4	27.2	26.9	30.0	31.6						
75	20.5	22.9	22.5	20.6	19.8	17.9	15.2	15.2	15.3	15.5	17.8	19.0						
80	10.2	11.9	11.3	9.87	9.25	8.31	6.52	6.23	6.48	6.85	8.12	8.89						
85	3.08	4.17	3.78	3.08	2.64	2.07	1.06	0.71	0.64	0.90	1.43	2.10						
90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2018-08-15

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.276
 Humidity:65.0%
 Test Distance:9.600m [K=1.0000]
 Remarks: