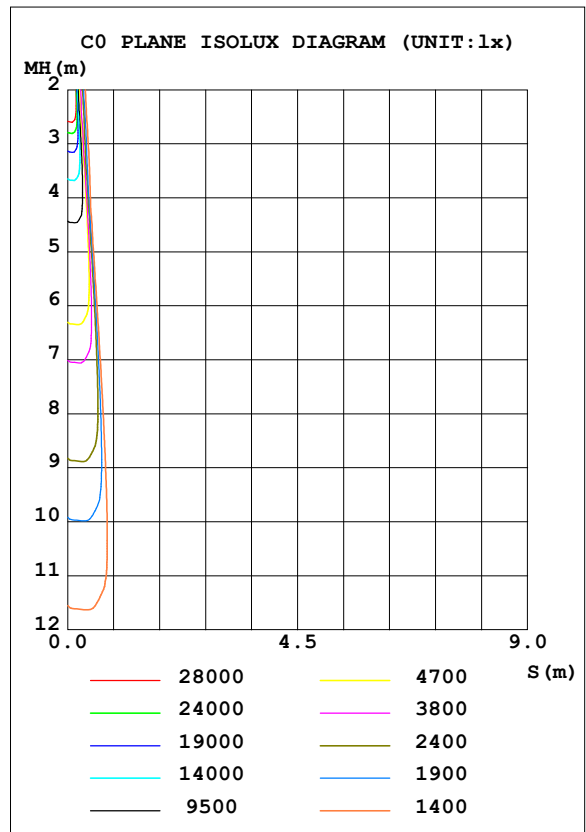
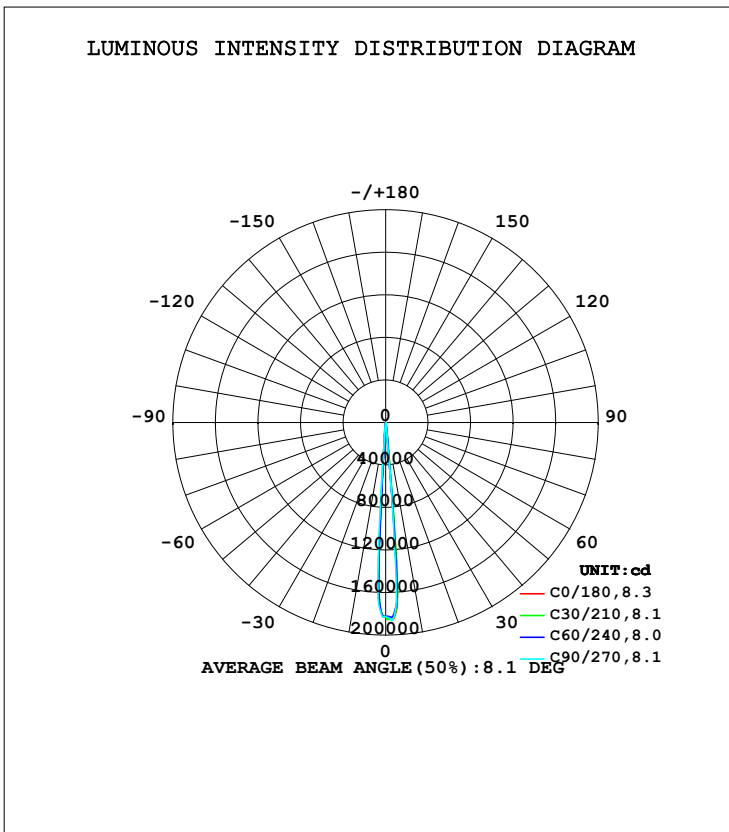




LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:219.36V I:1.1698A P:240.50W PF:0.9372 Freq:50.01Hz Lamp Flux:5142.62x1 lm		
NAME: ODIN	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: CLF	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 21.38 lm/W			
MODEL		I _{max} (cd)	186123	S/MH (C0/180)	0.10
NOMINAL POWER (W)	280	LOR (%)	100.0	S/MH (C90/270)	0.11
RATED VOLTAGE (V)	120	TOTAL FLUX (lm)	5142.6	η UP, DN (C0-180)	0.0,56.3
NOMINAL FLUX (lm)	5142.62	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0,43.7
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	0.00
TEST VOLTAGE (V)	120.0	η down (%)	100.0	CIBSE SHR MAX	1.00



C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: MEDIUM
 Temperature:15DEG
 Operators:danny
 Test Date:2020-01-11

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-HD5 SYSTEM V2.0.407.13
 Humidity:65.0%
 Test Distance:9.400m [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	52.79	52.28	50.12	42.01	35.22	33.79	40.17	52.27	0- 10	3874	3874	75.3,75.3
20	5.975	6.225	6.124	5.829	5.893	5.314	5.621	6.465	10- 20	421.7	4296	83.5,83.5
30	5.033	5.312	5.195	5.046	5.203	5.153	5.507	5.576	20- 30	234.4	4531	88.1,88.1
40	2.738	3.084	3.347	2.879	2.482	2.777	3.242	3.054	30- 40	252.0	4782	93,93
50	1.561	1.657	1.789	1.549	1.347	1.500	1.678	1.631	40- 50	170.4	4953	96.3,96.3
60	0.8590	0.8358	0.8918	0.7832	0.6518	0.7589	0.8182	0.8254	50- 60	103.5	5056	98.3,98.3
70	0.4147	0.3689	0.4302	0.4027	0.3217	0.3842	0.3748	0.3724	60- 70	52.51	5109	99.3,99.3
80	0.1390	0.1332	0.1387	0.0886	0.0990	0.0772	0.0930	0.1209	70- 80	30.73	5140	99.9,99.9
90	0.0021	0.0021	0.0021	0.0020	0.0021	0.0020	0.0021	0.0022	80- 90	2.998	5143	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:*100cd									UNIT:lm		

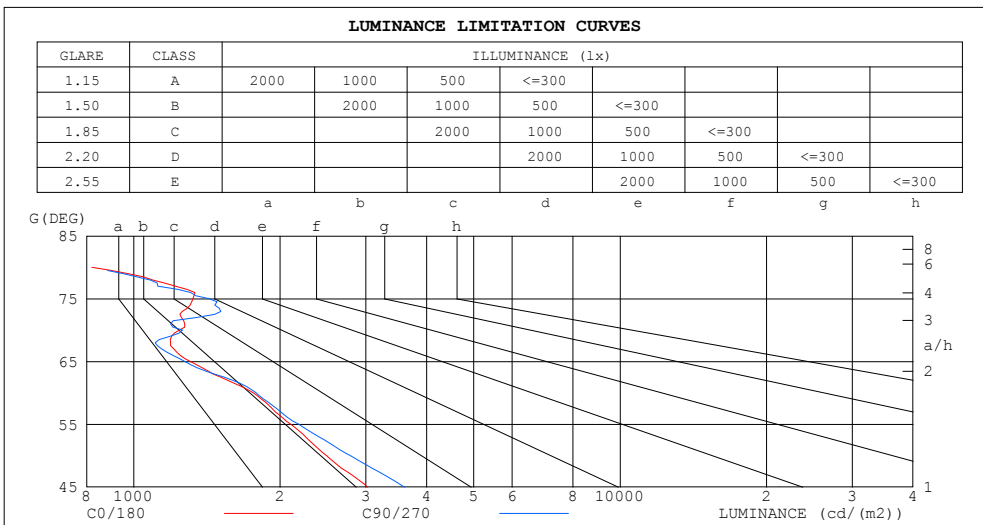
C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: MEDIUM
 Temperature:15DEG
 Operators:danny
 Test Date:2020-01-11

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-HD5 SYSTEM V2.0.407.13
 Humidity:65.0%
 Test Distance:9.400m [K=1.0000]
 Remarks:



LUMINANCE LIMITATION CURVES

Test:U:219.36V I:1.1698A P:240.50W PF:0.9372 Freq:50.01Hz Lamp Flux:5142.62x1 lm		
NAME: P015	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: CLF	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	206	181
80	820	800
75	1323	1429
70	1243	1259
65	1305	1273
60	1761	1785
55	2101	2182
50	2490	2787
45	3024	3607

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: MEDIUM
 Temperature:15DEG
 Operators:danny
 Test Date:2020-01-11

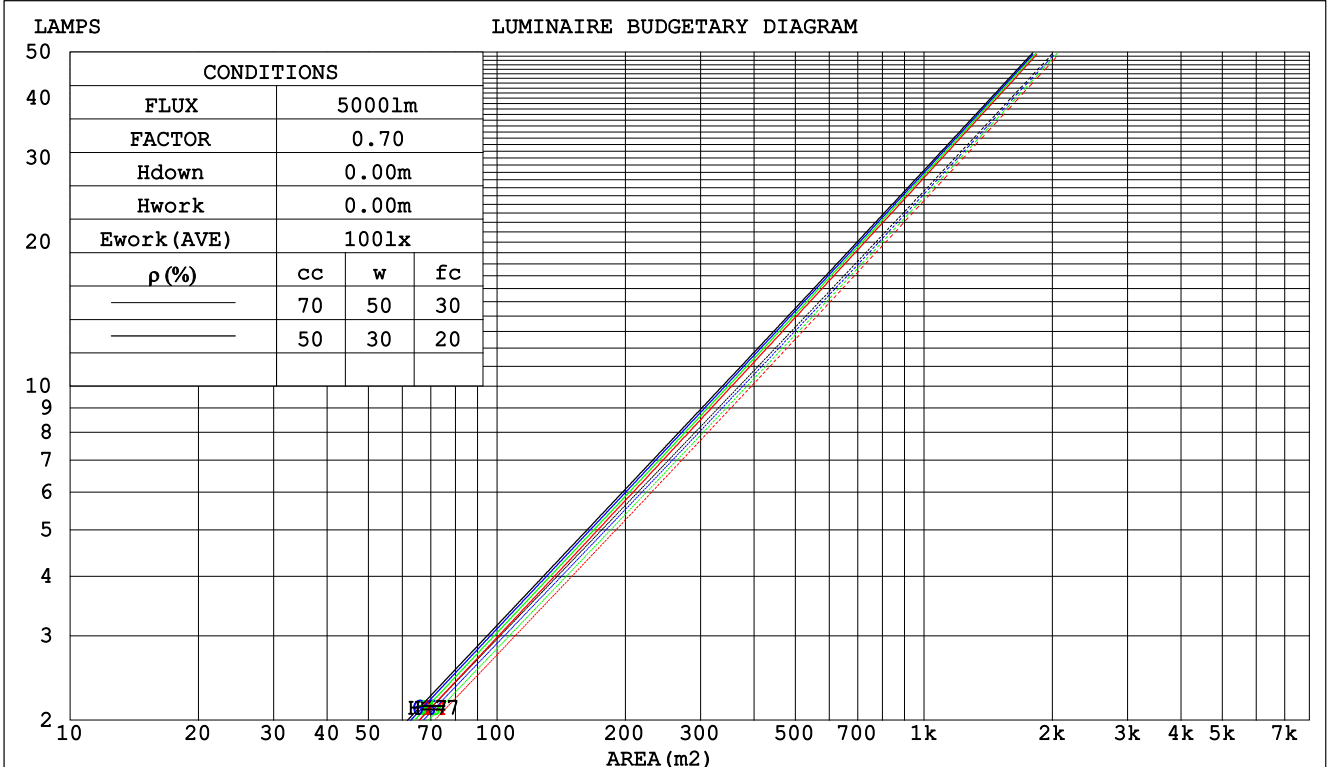
γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-HD5 SYSTEM V2.0.407.13
 Humidity:65.0%
 Test Distance:9.400m [K=1.0000]
 Remarks:



CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:219.36V I:1.1698A P:240.50W PF:0.9372 Freq:50.01Hz Lamp Flux:5142.62x1 lm		
NAME: P015	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: CLF	SUR.:	Shielding Angle:

pcc	80%			70%			50%			30%			10%			0		
	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0		
pw	0																	
pfc	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	1.14	1.12	1.10	1.11	1.10	1.08	1.07	1.06	1.05	1.04	1.03	1.02	1.00	.00	.99	.98		
2.0	1.09	1.06	1.04	1.07	1.05	1.03	1.04	1.02	1.01	1.01	.00	.99	.99	.98	.97	.95		
3.0	1.05	1.02	.99	1.04	1.01	.99	1.01	.99	.97	.99	.97	.96	.97	.96	.94	.93		
4.0	1.02	.99	.96	1.01	.98	.95	.99	.97	.94	.97	.95	.93	.96	.94	.92	.91		
5.0	.99	.96	.93	.99	.95	.93	.97	.94	.92	.96	.93	.92	.94	.92	.91	.90		
6.0	.97	.94	.91	.97	.93	.91	.95	.93	.91	.94	.92	.90	.93	.91	.89	.89		
7.0	.95	.92	.90	.95	.92	.89	.94	.91	.89	.93	.90	.89	.92	.90	.88	.87		
8.0	.94	.91	.88	.93	.90	.88	.93	.90	.88	.92	.89	.88	.91	.89	.87	.86		
9.0	.92	.89	.87	.92	.89	.87	.91	.89	.87	.91	.88	.87	.90	.88	.86	.86		
10.0	.91	.88	.86	.91	.88	.86	.90	.88	.86	.90	.87	.86	.89	.87	.86	.85		



C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: MEDIUM
 Temperature:15DEG
 Operators:danny
 Test Date:2020-01-11

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-HD5 SYSTEM V2.0.407.13
 Humidity:65.0%
 Test Distance:9.400m [K=1.0000]
 Remarks:



WEC AND CCEC

Test:U:219.36V I:1.1698A P:240.50W PF:0.9372 Freq:50.01Hz Lamp Flux:5142.62x1 lm															
NAME: P015						TYPE:						WEIGHT:			
SPEC.:						DIM.:						SERIAL No.:			
MFR.: CLF						SUR.:						Shielding Angle:			

ρcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.125	.071	.022	.118	.067	.021	.106	.061	.019	.094	.055	.017	.084	.049	.016	
2.0	.114	.063	.019	.109	.060	.018	.099	.055	.017	.090	.050	.016	.081	.046	.014	
3.0	.105	.056	.017	.100	.054	.016	.092	.050	.015	.084	.046	.014	.077	.043	.013	
4.0	.096	.050	.015	.092	.048	.014	.085	.045	.014	.079	.042	.013	.073	.040	.012	
5.0	.089	.045	.013	.086	.044	.013	.080	.041	.012	.074	.039	.012	.069	.037	.011	
6.0	.082	.041	.012	.080	.040	.012	.075	.038	.011	.070	.036	.011	.066	.035	.010	
7.0	.076	.038	.011	.074	.037	.011	.070	.035	.010	.066	.034	.010	.062	.032	.010	
8.0	.071	.035	.010	.070	.034	.010	.066	.033	.009	.062	.032	.009	.059	.030	.009	
9.0	.067	.032	.009	.065	.032	.009	.062	.031	.009	.059	.030	.008	.056	.029	.008	
10.0	.063	.030	.008	.062	.030	.008	.059	.029	.008	.056	.028	.008	.054	.027	.008	

ρcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	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	.168	.158	.149	.143	.135	.128	.098	.093	.089	.056	.054	.052	.018	.017	.017	
2.0	.149	.133	.119	.127	.114	.103	.087	.079	.072	.050	.046	.042	.016	.015	.014	
3.0	.133	.113	.098	.114	.098	.085	.078	.068	.059	.045	.040	.035	.014	.013	.011	
4.0	.119	.098	.081	.102	.084	.070	.070	.059	.050	.041	.034	.029	.013	.011	.010	
5.0	.108	.085	.068	.092	.074	.059	.064	.051	.042	.037	.030	.025	.012	.010	.008	
6.0	.098	.075	.058	.084	.065	.051	.058	.045	.036	.034	.027	.021	.011	.009	.007	
7.0	.089	.066	.050	.077	.057	.043	.053	.040	.031	.031	.024	.018	.010	.008	.006	
8.0	.082	.059	.043	.070	.051	.038	.049	.036	.027	.028	.021	.016	.009	.007	.005	
9.0	.075	.053	.038	.065	.046	.033	.045	.032	.023	.026	.019	.014	.008	.006	.005	
10.0	.070	.048	.033	.060	.042	.029	.042	.029	.021	.024	.017	.012	.008	.006	.004	

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: MEDIUM
 Temperature:15DEG
 Operators:danny
 Test Date:2020-01-11

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-HD5 SYSTEM V2.0.407.13
 Humidity:65.0%
 Test Distance:9.400m [K=1.0000]
 Remarks:



UGR(Unified Glare Rating) Table

Test:U:219.36V I:1.1698A P:240.50W PF:0.9372 Freq:50.01Hz Lamp Flux:5142.62x1 lm										
NAME: P015					TYPE:			WEIGHT:		
SPEC.:					DIM.:			SERIAL No.:		
MFR.: CLF					SUR.:			Shielding 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	3.9	4.5	4.1	4.6	4.8	3.5	4.0	3.7	4.1	4.3
3H	4.4	4.9	4.7	5.1	5.3	3.9	4.5	4.2	4.6	4.8
4H	4.8	5.3	5.1	5.5	5.7	4.4	4.9	4.6	5.1	5.3
6H	5.0	5.5	5.3	5.7	5.9	4.6	5.0	4.8	5.3	5.5
8H	5.0	5.5	5.3	5.7	5.9	4.5	5.0	4.8	5.2	5.5
12H	5.0	5.4	5.3	5.7	5.9	4.5	4.9	4.8	5.2	5.5
4H 2H	4.1	4.6	4.4	4.8	5.0	3.7	4.2	4.0	4.4	4.6
3H	4.8	5.2	5.1	5.5	5.8	4.3	4.7	4.6	5.0	5.3
4H	5.4	5.8	5.7	6.1	6.4	4.8	5.2	5.2	5.5	5.8
6H	5.6	6.0	6.0	6.3	6.7	5.1	5.4	5.4	5.8	6.1
8H	5.6	6.0	6.0	6.3	6.7	5.1	5.4	5.4	5.7	6.1
12H	5.6	5.9	6.0	6.3	6.7	5.0	5.3	5.4	5.7	6.1
8H 4H	5.5	5.8	5.9	6.2	6.5	5.0	5.3	5.3	5.7	6.0
6H	5.8	6.1	6.2	6.5	6.9	5.3	5.6	5.7	5.9	6.4
8H	5.8	6.0	6.2	6.5	6.9	5.3	5.5	5.7	5.9	6.4
12H	5.7	6.0	6.2	6.4	6.9	5.2	5.4	5.7	5.9	6.3
12H 4H	5.5	5.8	5.9	6.1	6.5	4.9	5.3	5.3	5.6	6.0
6H	5.8	6.0	6.2	6.4	6.9	5.2	5.5	5.7	5.9	6.3
8H	5.8	6.0	6.2	6.4	6.9	5.2	5.5	5.7	5.9	6.4
Variations with the observer position at spacings:										
S = 1.0H	+ 0.8 / - 0.8					+ 0.7 / - 0.7				
1.5H	+ 0.6 / - 0.6					+ 0.9 / - 0.7				
2.0H	+ 1.2 / - 1.1					+ 1.8 / - 1.6				

CIE Pub.117, 5143 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 5.7)
 Area: 0.1 m2

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: MEDIUM
 Temperature:15DEG
 Operators:danny
 Test Date:2020-01-11

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-HD5 SYSTEM V2.0.407.13
 Humidity:65.0%
 Test Distance:9.400m [K=1.0000]
 Remarks:



UTILIZATION FACTORS TABLE

Test:U:219.36V I:1.1698A P:240.50W PF:0.9372 Freq:50.01Hz Lamp Flux:5142.62x1 lm		
NAME: P015	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: CLF	SUR.:	Shielding 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) $k(RI) \times RCR = 5$									
k = 0.60	87	81	77	87	81	77	86	80	77	73
0.80	95	89	85	94	88	85	93	88	84	81
1.00	99	93	90	98	93	89	97	93	89	85
1.25	103	98	94	102	97	94	100	96	93	89
1.50	106	101	98	104	100	97	102	99	96	91
2.00	108	104	101	107	103	100	104	101	99	93
2.50	110	106	103	108	105	102	105	103	100	94
3.00	112	108	105	110	107	104	106	104	102	96
4.00	114	111	109	112	109	107	108	106	105	97
5.00	115	113	111	113	111	109	109	107	106	99
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNOM = 1.25			

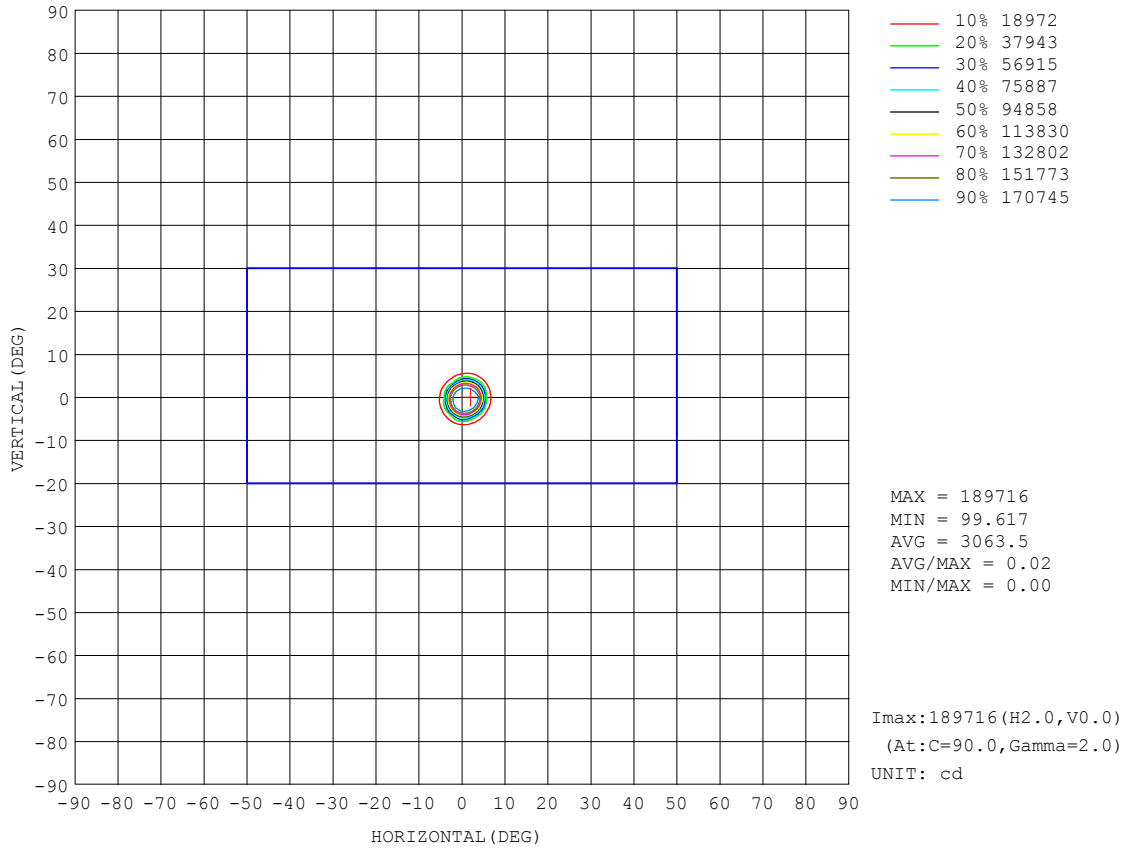
C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: MEDIUM
 Temperature:15DEG
 Operators:danny
 Test Date:2020-01-11

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-HD5 SYSTEM V2.0.407.13
 Humidity:65.0%
 Test Distance:9.400m [K=1.0000]
 Remarks:



ISOCANDELA DIAGRAM

Test:U:219.36V I:1.1698A P:240.50W PF:0.9372 Freq:50.01Hz Lamp Flux:5142.62x1 lm		
NAME: P015	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: CLF	SUR.:	Shielding Angle:



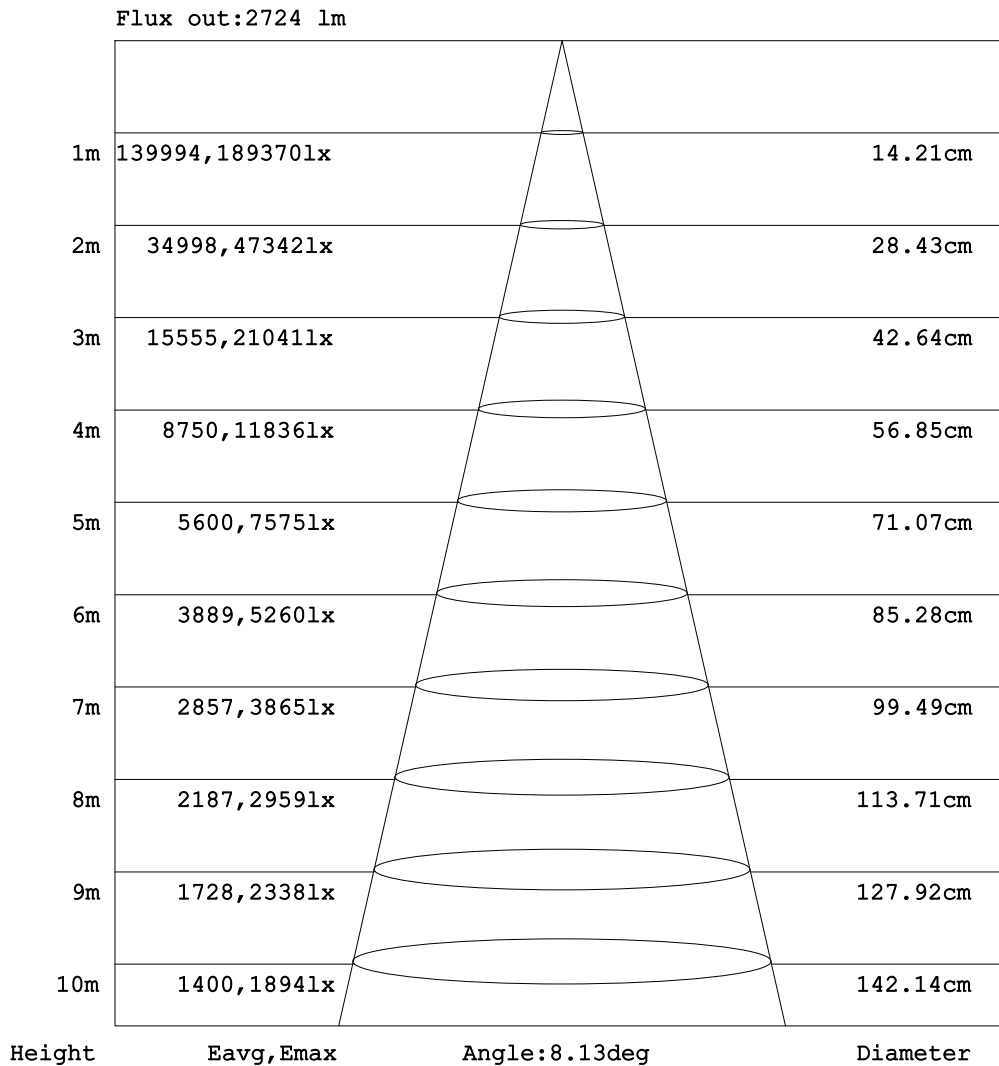
C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: MEDIUM
 Temperature:15DEG
 Operators:danny
 Test Date:2020-01-11

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-HD5 SYSTEM V2.0.407.13
 Humidity:65.0%
 Test Distance:9.400m [K=1.0000]
 Remarks:



AAI Figure

Test:U:219.36V I:1.1698A P:240.50W PF:0.9372 Freq:50.01Hz Lamp Flux:5142.62x1 lm		
NAME: P015	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: CLF	SUR.:	Shielding Angle:



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

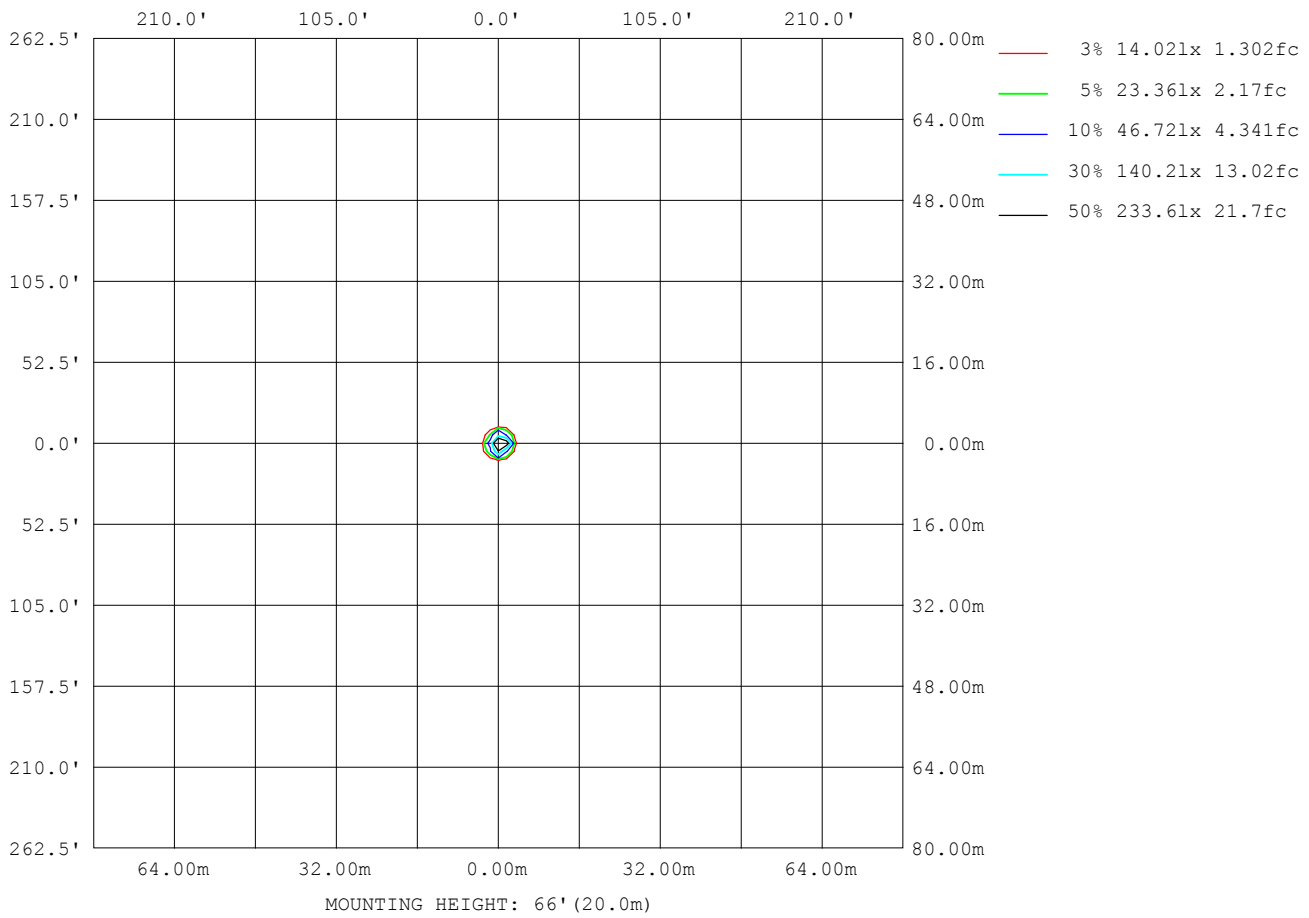
C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: MEDIUM
 Temperature:15DEG
 Operators:danny
 Test Date:2020-01-11

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-HD5 SYSTEM V2.0.407.13
 Humidity:65.0%
 Test Distance:9.400m [K=1.0000]
 Remarks:



ISOLUX DIAGRAM

Test:U:219.36V I:1.1698A P:240.50W PF:0.9372 Freq:50.01Hz Lamp Flux:5142.62x1 lm		
NAME: P015	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: CLF	SUR.:	Shielding Angle:



C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: MEDIUM
 Temperature:15DEG
 Operators:danny
 Test Date:2020-01-11

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-HD5 SYSTEM V2.0.407.13
 Humidity:65.0%
 Test Distance:9.400m [K=1.0000]
 Remarks:



LED Avg.L Report

Test:U:219.36V I:1.1698A P:240.50W PF:0.9372 Freq:50.01Hz Lamp Flux:5142.62x1 lm		
NAME: P015	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: CLF	SUR.:	Shielding Angle:

AvgL	cd/m2
L_0~180 (65) av	1116
L_0~180 (75) av	1092
L_0~180 (85) av	165
L_90~270 (65) av	1221
L_90~270 (75) av	1329
L_90~270 (85) av	169
L_45 (65) av	1176
L_45 (75) av	1215
L_45 (85) av	172

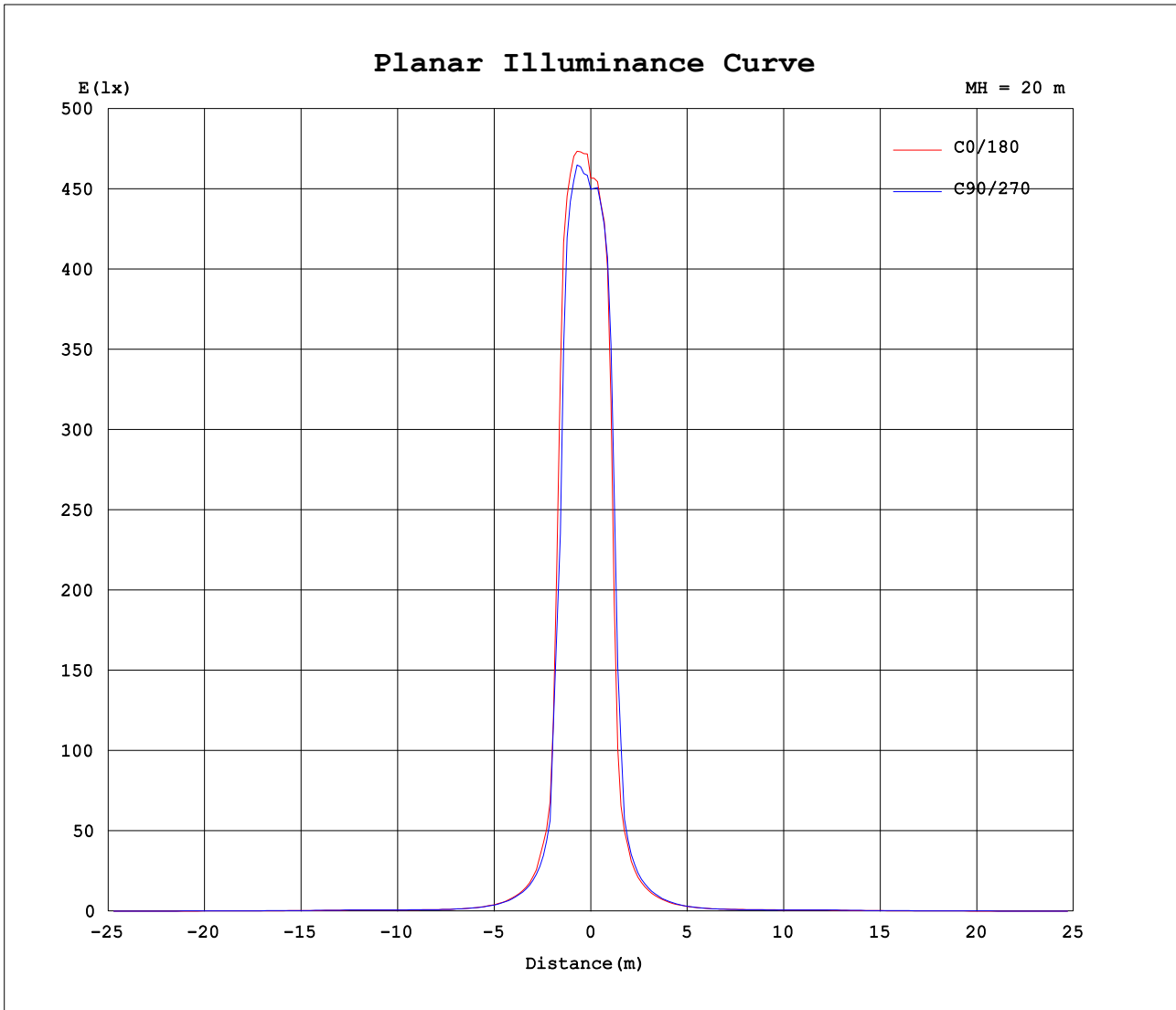
Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: MEDIUM
Temperature:15DEG
Operators:danny
Test Date:2020-01-11

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-HD5 SYSTEM V2.0.407.13
Humidity:65.0%
Test Distance:9.400m [K=1.0000]
Remarks:



Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: MEDIUM
Temperature:15DEG
Operators:danny
Test Date:2020-01-11

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-HD5 SYSTEM V2.0.407.13
Humidity:65.0%
Test Distance:9.400m [K=1.0000]
Remarks:



LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:219.36V I:1.1698A P:240.50W PF:0.9372 Freq:50.01Hz Lamp Flux:5142.62x1 lm		
NAME: P015	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: CLF	SUR.:	Shielding Angle:

Table--1

UNIT: ×100cd

C (DEG) \ γ (DEG)	0	30	60	90	120	150	180	210	240	270	300	330								
0	1823	1823	1823	1823	1823	1823	1823	1823	1823	1823	1823	1823								
5	857	831	662	708	331	241	201	187	186	236	405	716								
10	52.8	53.1	51.4	50.1	44.3	39.7	35.2	33.7	33.9	40.2	48.1	56.4								
15	14.4	14.3	14.4	13.9	13.0	11.8	11.1	10.5	10.5	11.6	13.9	15.4								
20	5.97	6.13	6.32	6.12	5.84	5.82	5.89	5.43	5.19	5.62	6.41	6.52								
25	4.51	5.00	5.18	4.92	4.54	4.93	5.11	4.84	4.46	4.88	5.29	5.08								
30	5.03	5.40	5.22	5.20	4.70	5.39	5.20	5.45	4.85	5.51	5.50	5.66								
35	3.82	4.54	3.87	4.40	3.56	4.18	3.29	4.08	3.28	4.14	3.66	4.51								
40	2.74	3.47	2.70	3.35	2.61	3.15	2.48	3.04	2.51	3.24	2.65	3.47								
45	2.09	2.58	2.01	2.55	1.94	2.35	1.87	2.27	1.86	2.41	1.96	2.56								
50	1.56	1.85	1.46	1.79	1.45	1.65	1.35	1.59	1.41	1.68	1.44	1.83								
55	1.18	1.30	1.08	1.25	1.09	1.14	0.96	1.10	1.05	1.17	1.05	1.30								
60	0.86	0.91	0.76	0.89	0.77	0.79	0.65	0.77	0.74	0.82	0.74	0.91								
65	0.54	0.57	0.46	0.54	0.49	0.49	0.41	0.47	0.48	0.49	0.45	0.56								
70	0.41	0.40	0.34	0.43	0.41	0.40	0.32	0.39	0.37	0.37	0.34	0.40								
75	0.33	0.40	0.29	0.37	0.30	0.30	0.23	0.31	0.27	0.32	0.27	0.38								
80	0.14	0.14	0.12	0.14	0.10	0.08	0.10	0.07	0.08	0.09	0.11	0.14								
85	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02								
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: MEDIUM
 Temperature:15DEG
 Operators:danny
 Test Date:2020-01-11

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-HD5 SYSTEM V2.0.407.13
 Humidity:65.0%
 Test Distance:9.400m [K=1.0000]
 Remarks: