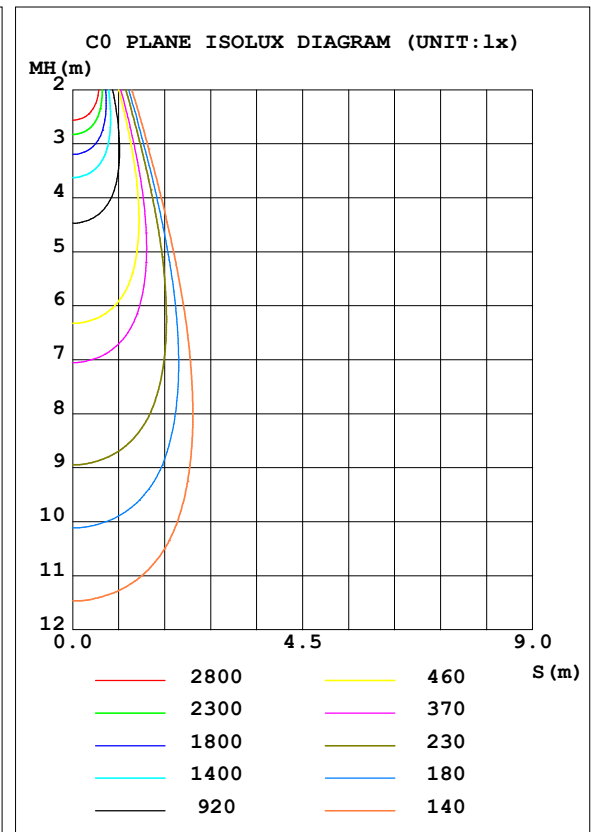
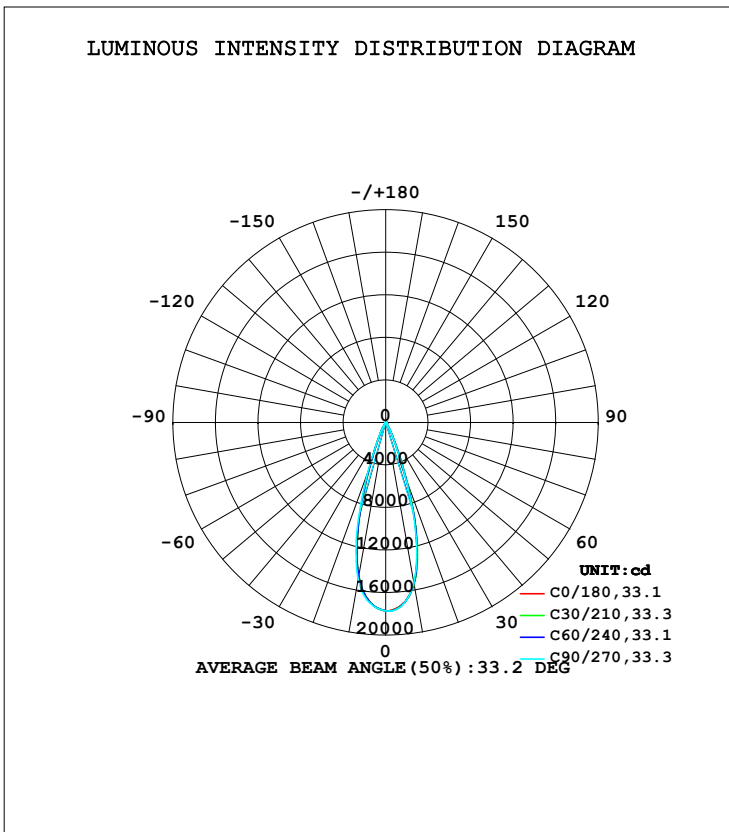




LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:219.23V I:1.2564A P:260.04W PF:0.9441 Freq:50.01Hz Lamp Flux:5556.11x1 lm		
NAME: ODIN	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: CLF	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 21.37 lm/W			
MODEL		I _{max} (cd)	17746	S/MH (C0/180)	0.49
NOMINAL POWER (W)	280	LOR (%)	100.0	S/MH (C90/270)	0.50
RATED VOLTAGE (V)	120	TOTAL FLUX (lm)	5556.1	η UP, DN (C0-180)	0.0, 52.5
NOMINAL FLUX (lm)	5556.11	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 47.5
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	0.50
TEST VOLTAGE (V)	120.0	η down (%)	100.0	CIBSE SHR MAX	0.50



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	1537	1540	1530	1487	1463	1466	1492	1520	0- 10	1571	1571	28.3,28.3
20	571.2	569.5	542.6	485.1	432.3	437.8	479.3	529.8	10- 20	2800	4371	78.7,78.7
30	82.71	81.57	78.91	71.59	60.09	61.59	65.05	73.08	20- 30	946.2	5318	95.7,95.7
40	8.313	8.839	8.925	8.246	7.700	7.747	8.125	8.152	30- 40	147.3	5465	98.4,98.4
50	4.867	5.372	5.128	4.455	4.543	4.366	4.946	5.221	40- 50	48.71	5514	99.2,99.2
60	1.913	2.056	1.975	1.714	1.522	1.647	1.854	1.936	50- 60	28.05	5542	99.7,99.7
70	0.6161	0.6183	0.5884	0.5220	0.4746	0.4758	0.5326	0.5732	60- 70	10.48	5552	99.9,99.9
80	0.1653	0.1748	0.1582	0.1504	0.1545	0.1386	0.1448	0.1603	70- 80	3.079	5555	100,100
90	0.0134	0.0139	0.0138	0.0135	0.0133	0.0130	0.0130	0.0132	80- 90	0.9368	5556	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:×10cd									UNIT:lm		

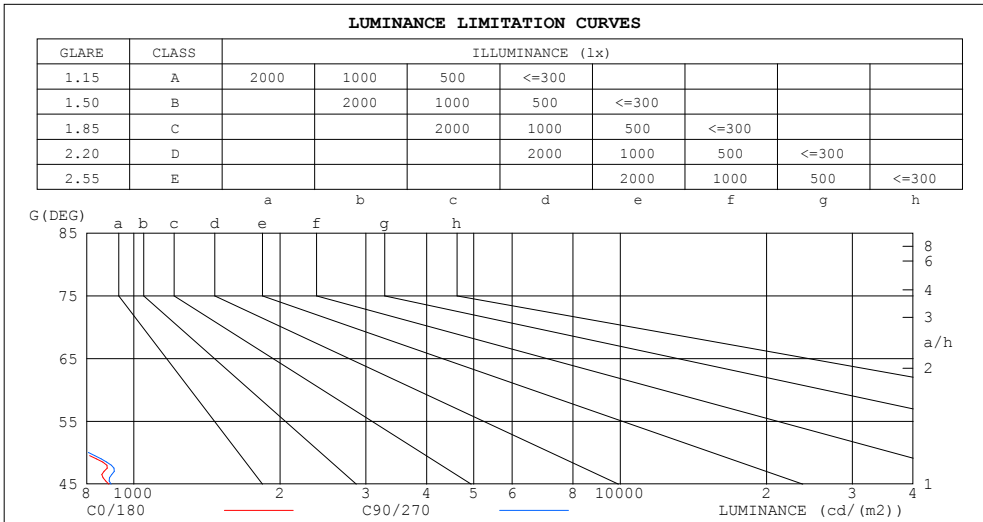
C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: MEDIUM
 Temperature:15DEG
 Operators:danny
 Test Date:2020-01-11

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:219.23V I:1.2564A P:260.04W PF:0.9441 Freq:50.01Hz Lamp Flux:5556.11x1 lm		
NAME: ODIN	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: CLF	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	121	110
80	99	92
75	122	109
70	187	174
65	272	249
60	397	400
55	584	559
50	786	807
45	889	898

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

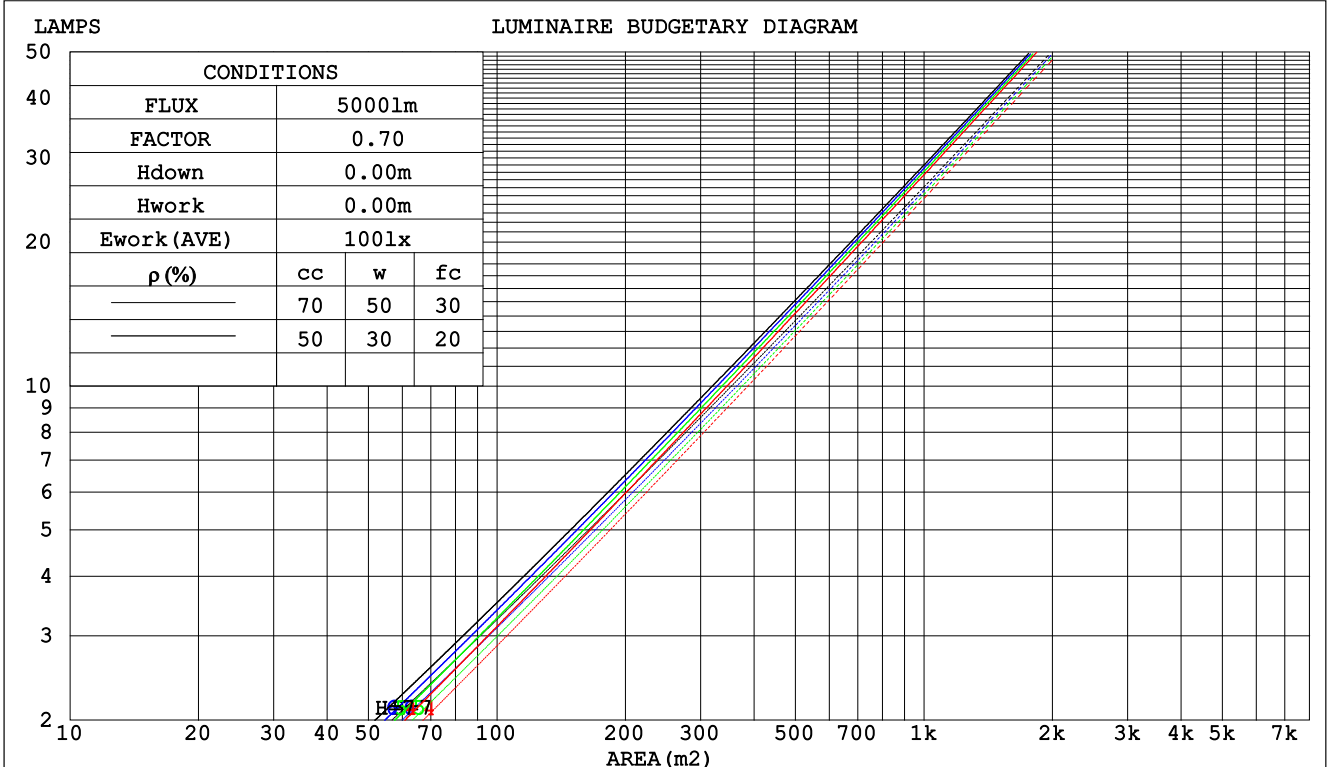
γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-HD5 SYSTEM V2.0.407.13
 Humidity:65.0%
 Test Distance:9.400m [K=1.0000]
 Remarks:



CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:219.23V I:1.2564A P:260.04W PF:0.9441 Freq:50.01Hz Lamp Flux:5556.11x1 lm		
NAME: ODIN	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															
	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	1.13	1.11	1.09	1.11	1.09	1.07	1.07	1.05	1.04	1.03	1.02	1.01	.00	.99	.98	.96
2.0	1.07	1.04	1.01	1.06	1.03	1.00	1.02	1.00	.98	.00	.98	.96	.97	.95	.94	.93
3.0	1.02	.99	.96	1.01	.98	.95	.99	.96	.93	.96	.94	.92	.94	.92	.91	.89
4.0	.98	.94	.91	.97	.93	.90	.95	.92	.89	.93	.91	.88	.91	.89	.87	.86
5.0	.94	.90	.87	.93	.89	.86	.92	.88	.86	.90	.87	.85	.89	.86	.84	.83
6.0	.91	.86	.83	.90	.86	.83	.89	.85	.83	.88	.84	.82	.86	.84	.82	.80
7.0	.88	.83	.80	.87	.83	.80	.86	.82	.80	.85	.82	.79	.84	.81	.79	.78
8.0	.85	.80	.77	.84	.80	.77	.83	.80	.77	.82	.79	.77	.82	.79	.76	.75
9.0	.82	.78	.75	.82	.78	.75	.81	.77	.75	.80	.77	.74	.79	.76	.74	.73
10.0	.79	.75	.73	.79	.75	.72	.78	.75	.72	.78	.74	.72	.77	.74	.72	.71



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:219.23V I:1.2564A P:260.04W PF:0.9441 Freq:50.01Hz Lamp Flux:5556.11x1 lm														
NAME: ODIN					TYPE:					WEIGHT:				
SPEC.:					DIM.:					SERIAL No.:				
MFR.: CLF					SUR.:					Shielding 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	.141	.080	.025	.135	.077	.024	.122	.070	.022	.111	.064	.020	.100	.058	.019	
2.0	.131	.072	.022	.126	.069	.021	.115	.064	.020	.106	.059	.019	.097	.055	.017	
3.0	.123	.065	.020	.118	.063	.019	.109	.059	.018	.102	.056	.017	.094	.052	.016	
4.0	.115	.060	.018	.111	.058	.017	.104	.055	.016	.097	.052	.016	.091	.049	.015	
5.0	.109	.055	.016	.105	.054	.016	.099	.052	.015	.093	.049	.015	.088	.047	.014	
6.0	.103	.052	.015	.100	.051	.015	.095	.049	.014	.090	.047	.014	.085	.045	.013	
7.0	.098	.048	.014	.096	.048	.014	.091	.046	.013	.087	.044	.013	.083	.043	.013	
8.0	.094	.046	.013	.091	.045	.013	.087	.044	.012	.084	.042	.012	.080	.041	.012	
9.0	.090	.043	.012	.088	.043	.012	.084	.042	.012	.081	.040	.012	.078	.039	.011	
10.0	.086	.041	.011	.084	.041	.011	.081	.040	.011	.078	.039	.011	.075	.038	.011	

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	.169	.158	.148	.144	.135	.127	.099	.093	.088	.057	.054	.051	.018	.017	.017	
2.0	.151	.133	.117	.129	.114	.102	.089	.079	.071	.051	.046	.042	.016	.015	.014	
3.0	.136	.113	.095	.117	.098	.082	.080	.068	.058	.046	.040	.034	.015	.013	.011	
4.0	.124	.098	.078	.106	.085	.068	.073	.059	.048	.042	.035	.028	.014	.011	.009	
5.0	.114	.086	.065	.097	.074	.057	.067	.052	.040	.039	.030	.024	.013	.010	.008	
6.0	.105	.076	.055	.090	.066	.048	.062	.046	.034	.036	.027	.020	.012	.009	.007	
7.0	.097	.068	.047	.084	.059	.041	.058	.041	.029	.034	.024	.017	.011	.008	.006	
8.0	.091	.061	.040	.078	.053	.035	.054	.037	.025	.032	.022	.015	.010	.007	.005	
9.0	.085	.055	.035	.074	.048	.031	.051	.034	.022	.030	.020	.013	.010	.007	.004	
10.0	.081	.051	.031	.070	.044	.027	.048	.031	.019	.028	.018	.011	.009	.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:219.23V I:1.2564A P:260.04W PF:0.9441 Freq:50.01Hz Lamp Flux:5556.11x1 lm										
NAME: ODIN					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	-3.2	-2.5	-3.0	-2.4	-2.2	-3.6	-2.9	-3.4	-2.7	-2.6
3H	-3.2	-2.6	-3.0	-2.4	-2.2	-3.6	-3.0	-3.3	-2.8	-2.6
4H	-3.3	-2.7	-3.0	-2.5	-2.2	-3.6	-3.0	-3.4	-2.8	-2.6
6H	-3.3	-2.8	-3.0	-2.5	-2.3	-3.7	-3.1	-3.4	-2.9	-2.7
8H	-3.4	-2.8	-3.1	-2.6	-2.3	-3.7	-3.2	-3.4	-2.9	-2.7
12H	-3.4	-2.9	-3.1	-2.6	-2.3	-3.8	-3.2	-3.5	-3.0	-2.7
4H 2H	-3.3	-2.7	-3.0	-2.5	-2.3	-3.6	-3.0	-3.4	-2.8	-2.6
3H	-3.3	-2.7	-3.0	-2.5	-2.2	-3.6	-3.1	-3.3	-2.8	-2.6
4H	-3.3	-2.8	-3.0	-2.5	-2.2	-3.7	-3.2	-3.3	-2.9	-2.6
6H	-3.4	-3.0	-3.0	-2.6	-2.3	-3.7	-3.3	-3.4	-3.0	-2.6
8H	-3.4	-3.0	-3.0	-2.7	-2.3	-3.8	-3.4	-3.4	-3.0	-2.7
12H	-3.5	-3.1	-3.1	-2.7	-2.3	-3.8	-3.4	-3.4	-3.1	-2.7
8H 4H	-3.4	-3.0	-3.1	-2.7	-2.3	-3.8	-3.4	-3.4	-3.1	-2.7
6H	-3.5	-3.2	-3.1	-2.8	-2.4	-3.9	-3.5	-3.4	-3.1	-2.7
8H	-3.5	-3.2	-3.1	-2.8	-2.4	-3.9	-3.6	-3.4	-3.2	-2.7
12H	-3.6	-3.3	-3.1	-2.9	-2.4	-3.9	-3.7	-3.5	-3.2	-2.8
12H 4H	-3.5	-3.1	-3.1	-2.8	-2.4	-3.9	-3.5	-3.4	-3.1	-2.7
6H	-3.6	-3.3	-3.1	-2.9	-2.4	-3.9	-3.6	-3.5	-3.2	-2.8
8H	-3.6	-3.3	-3.1	-2.9	-2.4	-3.9	-3.7	-3.5	-3.2	-2.8
Variations with the observer position at spacings:										
S = 1.0H	+ 1.3 / - 1.8					+ 1.6 / - 2.0				
1.5H	+ 1.4 / - 0.9					+ 1.7 / - 1.0				
2.0H	+ 2.0 / - 2.6					+ 1.9 / - 3.0				

CIE Pub.117, 5556 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 6.0)
 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:219.23V I:1.2564A P:260.04W PF:0.9441 Freq:50.01Hz Lamp Flux:5556.11x1 lm		
NAME: ODIN	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	91	85	81	90	85	81	89	84	81	78
0.80	98	92	89	97	92	89	96	91	88	85
1.00	101	96	93	101	96	93	99	96	92	89
1.25	105	100	97	104	100	97	102	99	96	92
1.50	107	103	100	106	102	100	104	101	99	94
2.00	110	106	103	108	105	102	106	103	101	96
2.50	111	108	105	110	106	104	107	104	102	96
3.00	113	109	107	111	108	106	107	105	104	97
4.00	114	112	110	112	110	109	109	107	106	99
5.00	116	114	112	114	112	110	110	108	107	100
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNOM = 1.25			

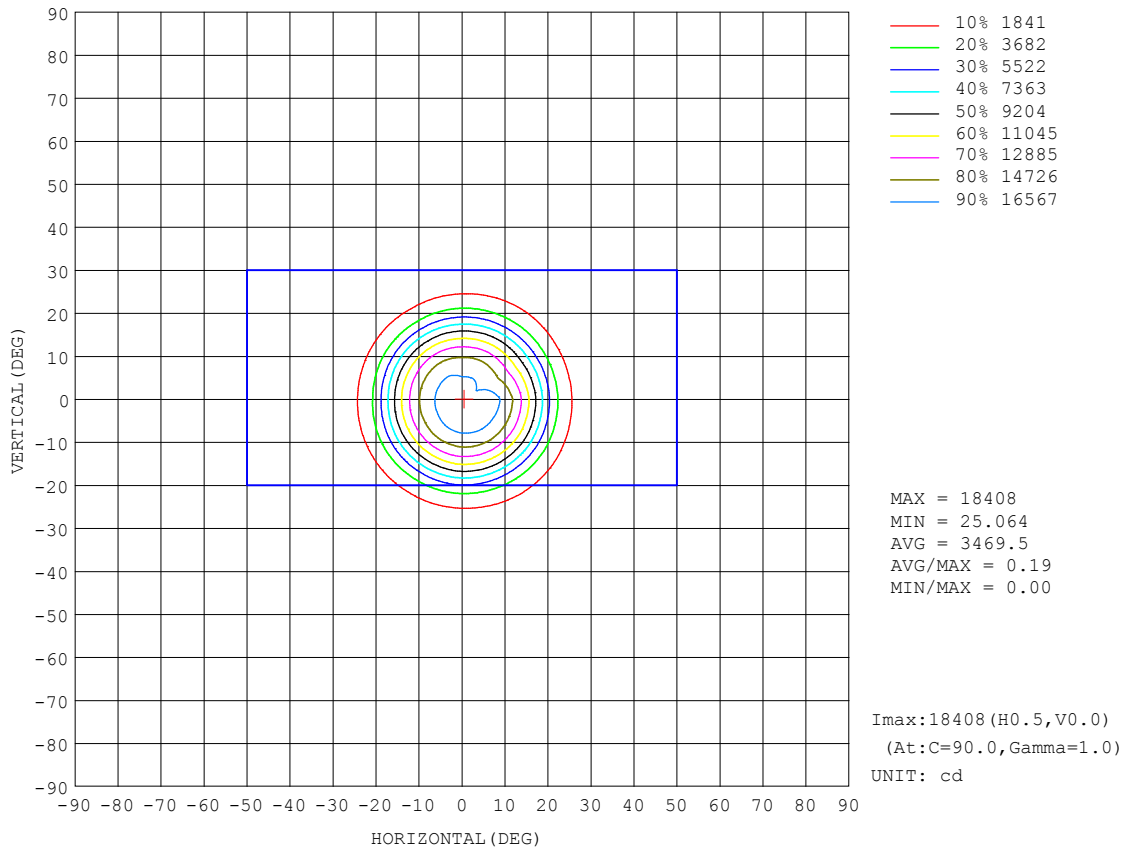
C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: MEDIUM
 Temperature:15DEG
 Operators:danny
 Test Date:2020-01-11

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:219.23V I:1.2564A P:260.04W PF:0.9441 Freq:50.01Hz Lamp Flux:5556.11x1 lm		
NAME: ODIN	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: CLF	SUR.:	Shielding Angle:



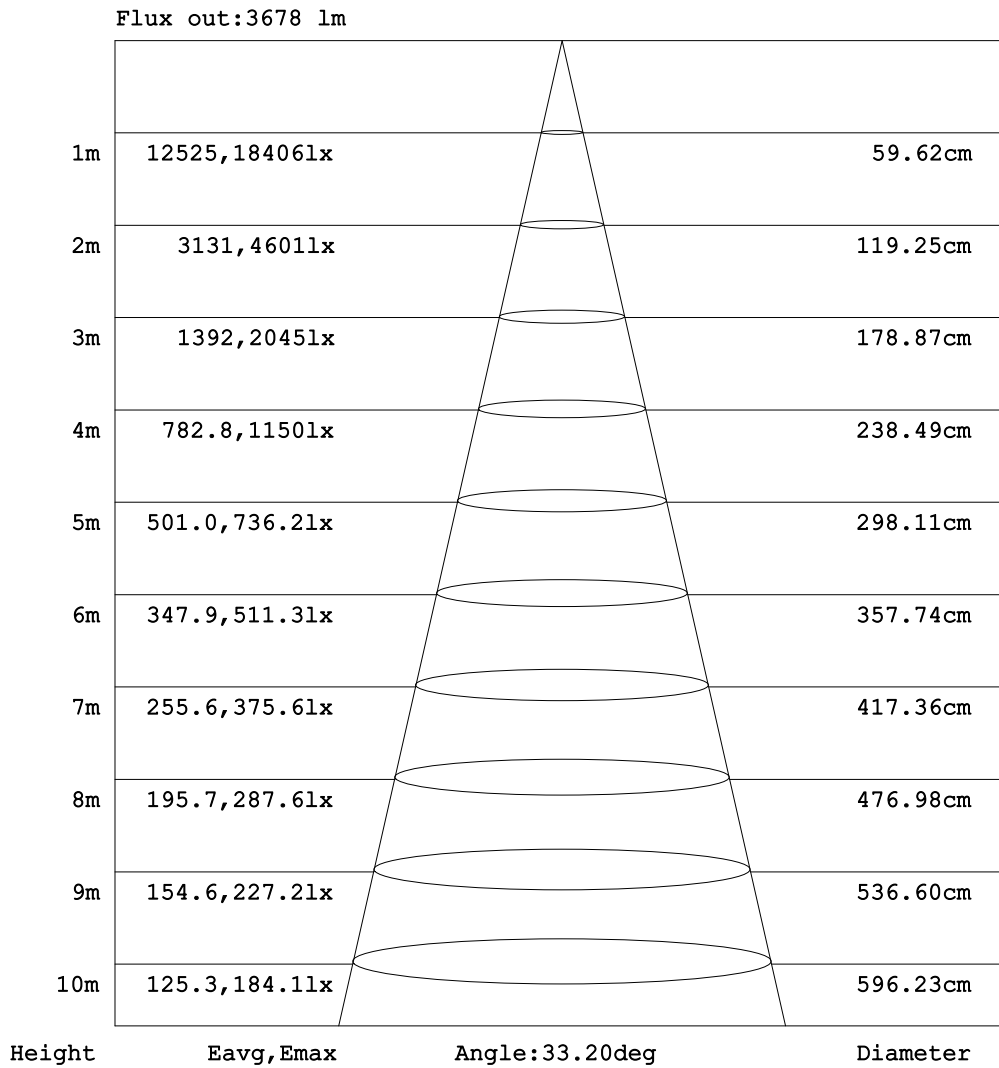
C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: MEDIUM
 Temperature:15DEG
 Operators:danny
 Test Date:2020-01-11

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:219.23V I:1.2564A P:260.04W PF:0.9441 Freq:50.01Hz Lamp Flux:5556.11x1 lm		
NAME: ODIN	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.

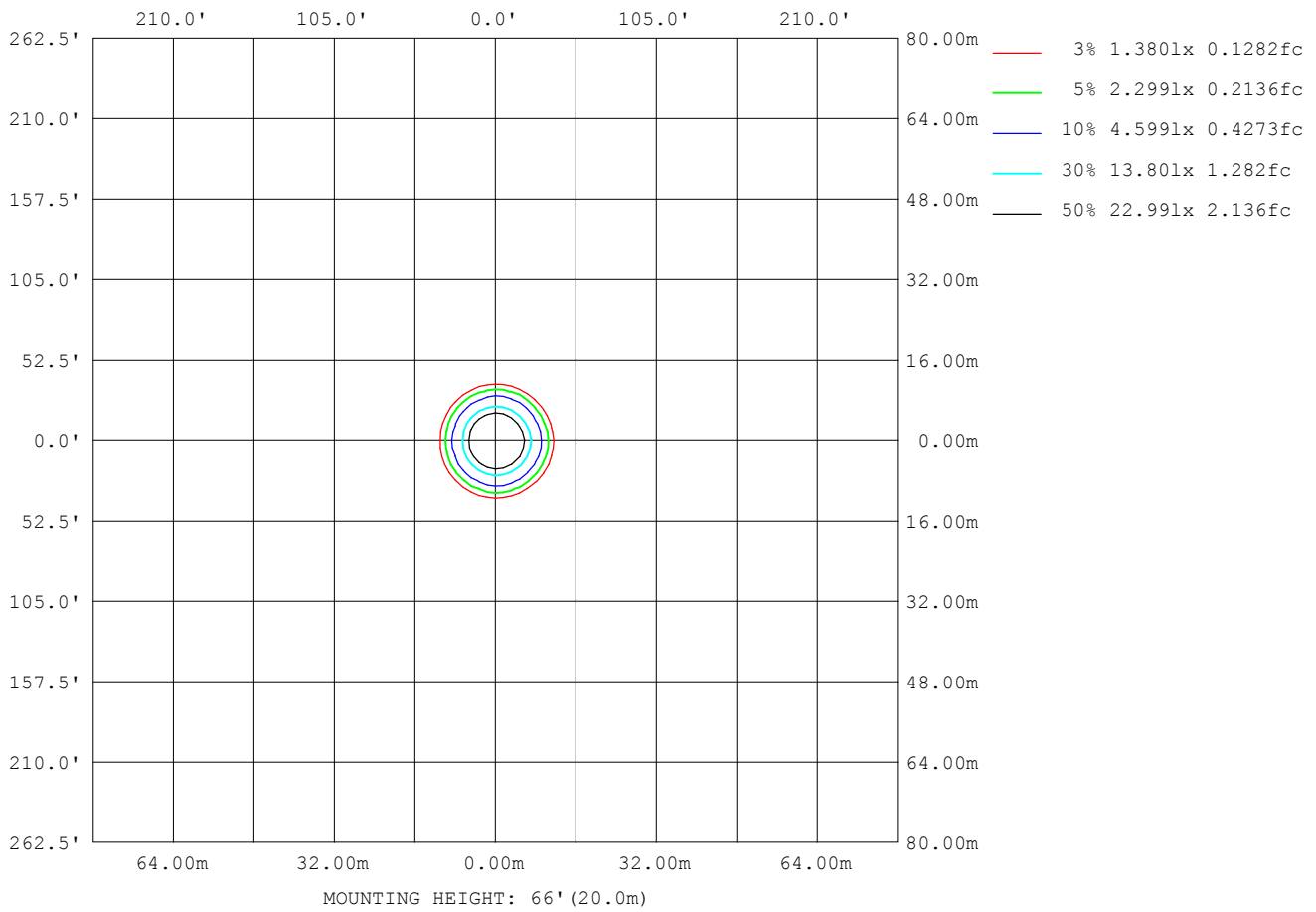
C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: MEDIUM
 Temperature:15DEG
 Operators:danny
 Test Date:2020-01-11

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:219.23V I:1.2564A P:260.04W PF:0.9441 Freq:50.01Hz Lamp Flux:5556.11x1 lm		
NAME: ODIN	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:219.23V I:1.2564A P:260.04W PF:0.9441 Freq:50.01Hz Lamp Flux:5556.11x1 lm		
NAME: ODIN	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: CLF	SUR.:	Shielding Angle:

AvgL	cd/m2
L_0~180 (65) av	231
L_0~180 (75) av	104
L_0~180 (85) av	111
L_90~270 (65) av	238
L_90~270 (75) av	102
L_90~270 (85) av	102
L_45 (65) av	232
L_45 (75) av	102
L_45 (85) av	107

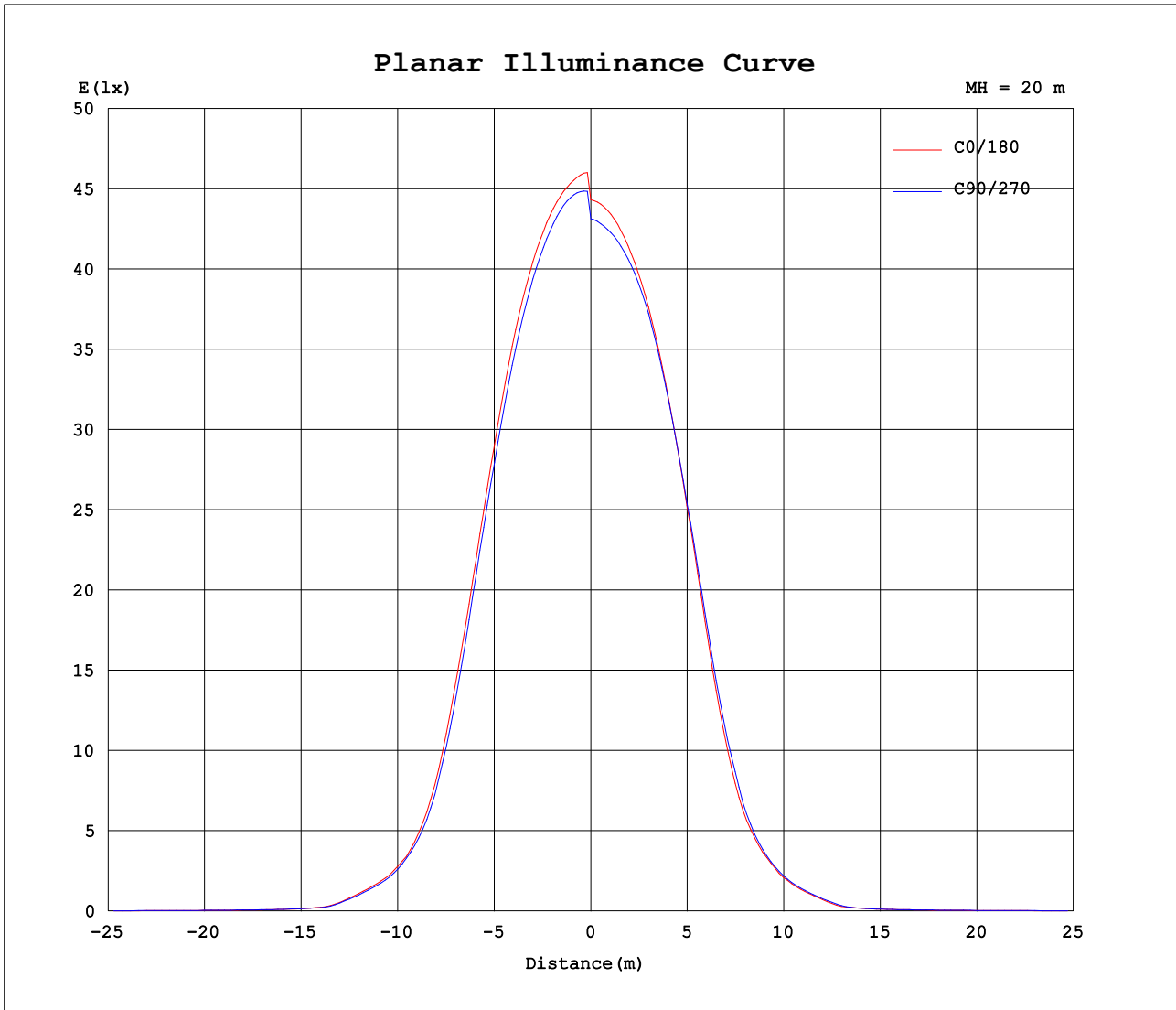
Standard: GB/T 29293-2012

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:219.23V I:1.2564A P:260.04W PF:0.9441 Freq:50.01Hz Lamp Flux:5556.11x1 lm		
NAME: ODIN	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: CLF	SUR.:	Shielding Angle:

Table--1

UNIT: x10cd

C (DEG) γ (DEG)	0	30	60	90	120	150	180	210	240	270	300	330							
0	1771	1771	1771	1771	1771	1771	1771	1771	1771	1771	1771	1771							
5	1722	1727	1728	1731	1717	1704	1696	1698	1699	1705	1714	1720							
10	1537	1543	1538	1530	1500	1475	1463	1465	1468	1492	1511	1529							
15	1126	1143	1125	1109	1060	1030	998	994	1000	1041	1071	1112							
20	571	582	556	543	497	473	432	440	435	479	503	557							
25	200	209	205	196	177	167	162	155	156	171	185	195							
30	82.7	84.4	78.7	78.9	74.4	68.7	60.1	60.8	62.4	65.0	68.2	78.1							
35	17.6	17.6	18.0	16.7	15.7	14.5	13.4	13.3	12.9	14.1	15.2	15.8							
40	8.31	9.11	8.57	8.93	8.09	8.40	7.70	8.03	7.46	8.13	7.70	8.62							
45	6.05	6.54	5.99	6.27	5.81	6.28	6.07	6.23	5.75	6.21	5.83	6.40							
50	4.87	5.52	5.22	5.13	4.27	4.64	4.54	4.56	4.17	4.95	5.05	5.40							
55	3.23	3.46	3.32	3.17	2.81	2.88	2.74	2.83	2.72	3.05	3.13	3.37							
60	1.91	2.19	1.92	1.98	1.66	1.77	1.52	1.70	1.59	1.85	1.76	2.12							
65	1.11	1.16	1.05	1.04	0.92	0.92	0.85	0.88	0.86	0.97	0.97	1.11							
70	0.62	0.64	0.60	0.59	0.54	0.51	0.47	0.47	0.48	0.53	0.53	0.62							
75	0.30	0.31	0.30	0.28	0.25	0.24	0.23	0.22	0.23	0.25	0.27	0.29							
80	0.17	0.17	0.18	0.16	0.15	0.15	0.15	0.14	0.14	0.14	0.16	0.16							
85	0.10	0.10	0.11	0.10	0.09	0.09	0.09	0.08	0.08	0.08	0.10	0.09							
90	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01							

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: