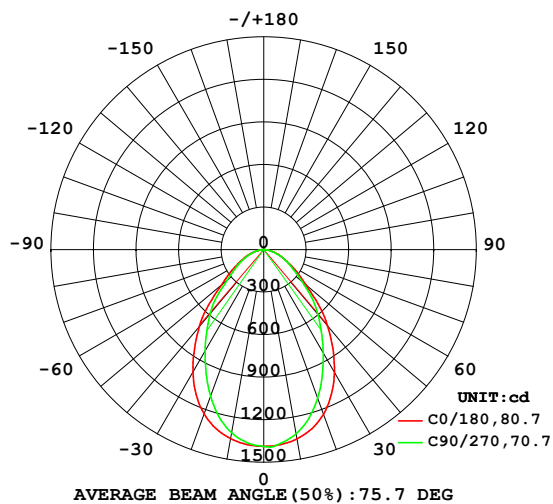


LUMINAIRE PHOTOMETRIC TEST REPORT

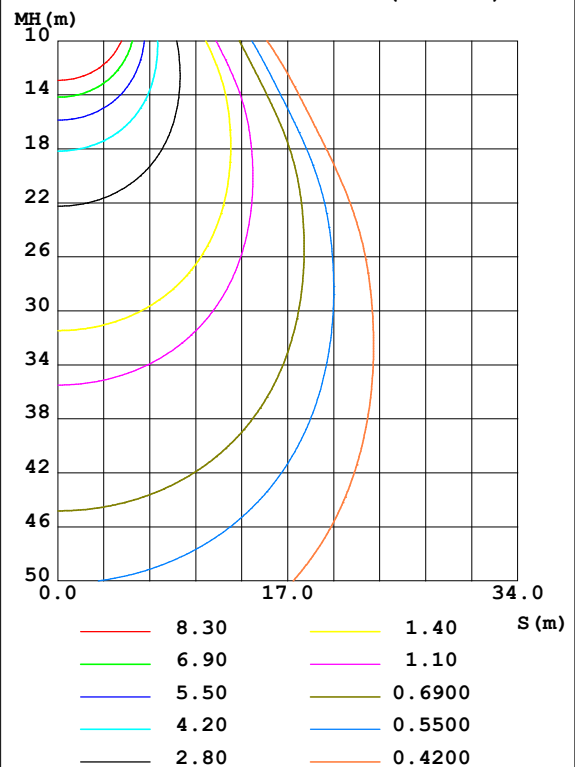
Test:U:239.9V I:0.1128A P:25.38W PF:0.9380 Lamp Flux:2347.73x1 lm		
NAME: HIP_1160_NA_WHT_DEGLARING_HE_500mA_4000K CRI90TYPE:LED		WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 92.49 lm/W			
LED 20000mm	1300lm 940 HV ADV6	Imax(cd)	1394	S/MH(C0/180)	1.10
NOMINAL POWER(W)		LOR(%)	100.0	S/MH(C90/270)	0.96
RATED VOLTAGE(V)	230.0	TOTAL FLUX(lm)	2347.7	η UP,DN(C0-180)	0.0,50.4
NOMINAL FLUX(lm)	2347.73	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,49.6
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.00
TEST VOLTAGE(V)	230	η down(%)	100.0	CIBSE SHR MAX	1.15

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JEFF
Test Date:29 January 2024

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity:65.0%
Test Distance:7.890m [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	1355	1337	1319	1337	1353	1328	1312	1329	0- 10	130.0	130.0	5.54,5.54
20	1234	1172	1115	1172	1232	1157	1098	1157	10- 20	354.7	484.6	20.6,20.6
30	997.1	912.3	840.7	913.7	998.5	895.7	827.9	895.5	20- 30	479.0	963.6	41,41
40	701.4	647.2	596.1	651.5	706.2	641.3	589.2	636.2	30- 40	483.7	1447	61.6,61.6
50	389.1	375.2	356.7	389.0	391.5	374.1	340.0	368.5	40- 50	390.4	1838	78.3,78.3
60	220.1	210.5	207.2	216.3	221.2	208.4	201.8	206.3	50- 60	253.8	2091	89.1,89.1
70	118.9	116.5	114.2	119.6	120.8	117.2	112.5	115.0	60- 70	159.8	2251	95.9,95.9
80	38.50	37.88	38.42	40.10	40.01	39.42	37.64	37.37	70- 80	80.51	2332	99.3,99.3
90	0.4074	0.5543	0.5240	0.6549	0.4845	0.5433	0.4250	0.4683	80- 90	15.93	2348	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		

Conical surface Flux(90deg): 1661.5 lm

%lum = 70.8%

%lamp = 70.8%

Conical surface Flux(120deg): 2091.5 lm

%lum = 89.1%

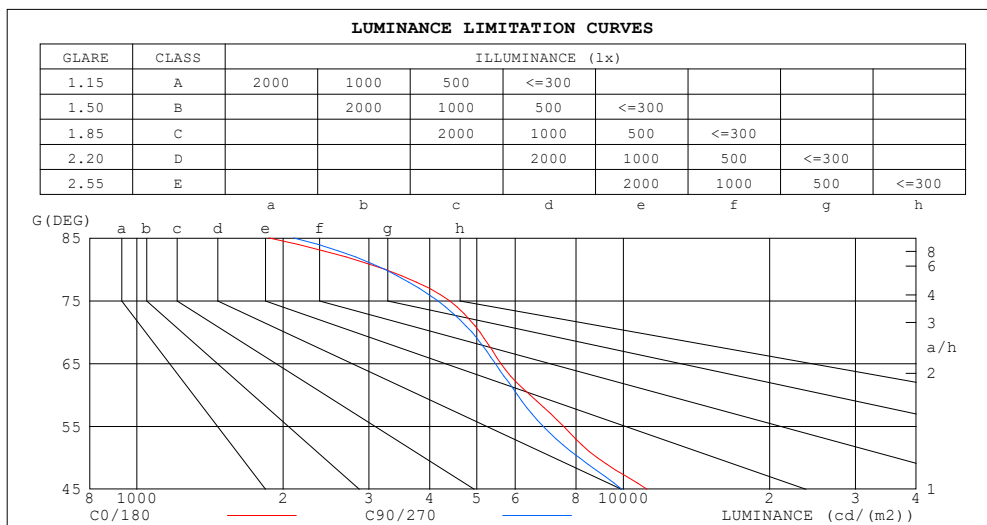
%lamp = 89.1%

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:JEFF
 Test Date:29 January 2024

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.295
 Humidity:65.0%
 Test Distance:7.890m [K=1.0000]
 Remarks:

LUMINANCE LIMITATION CURVES

Test:U:239.9V I:0.1128A P:25.38W PF:0.9380 Lamp Flux:2347.73x1 lm		
NAME: HIP_1160_NA_WHT_DEGLARING_HE_500mA_4000K CRI90TYPE:LED		WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	1872	2102
80	3237	3236
75	4398	4153
70	5075	4884
65	5602	5456
60	6428	6061
55	7538	6842
50	8839	8117
45	11203	9926

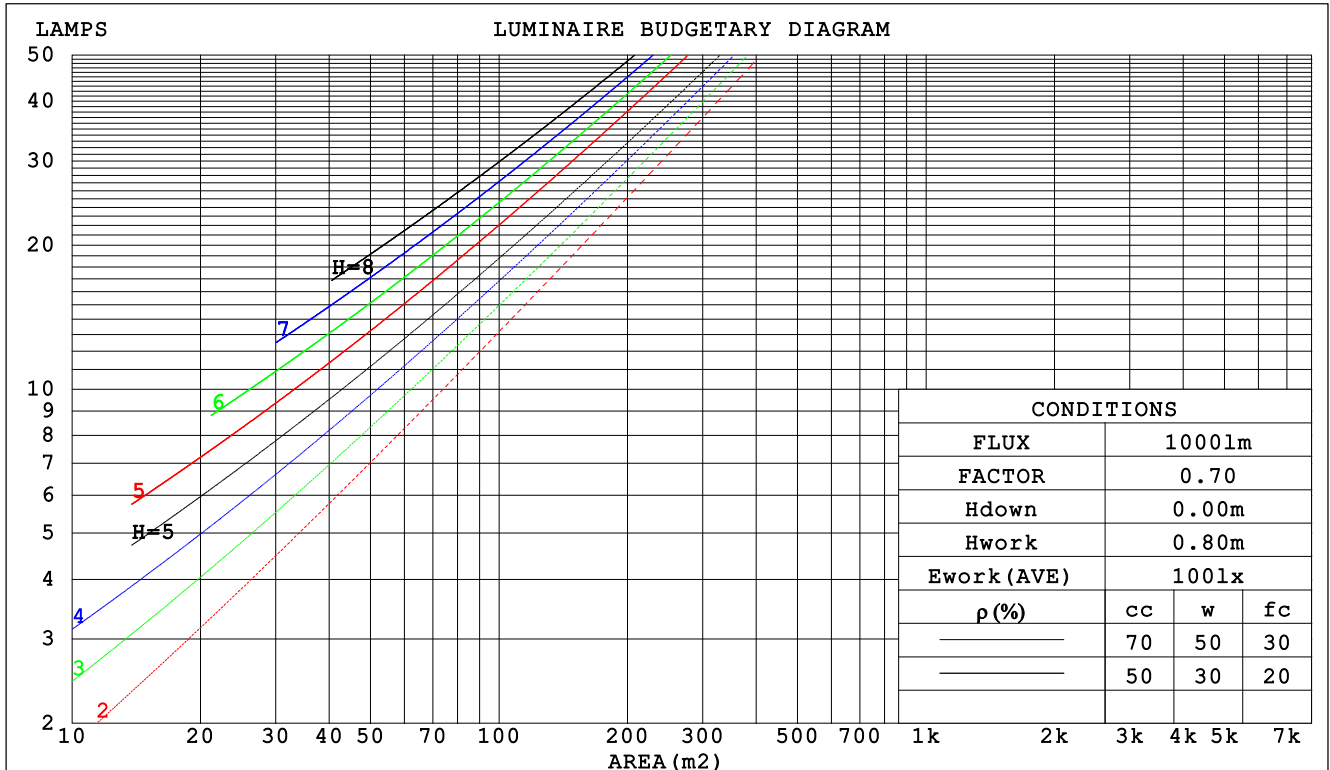
C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JEFF
Test Date:29 January 2024

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity:65.0%
Test Distance:7.890m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:239.9V I:0.1128A P:25.38W PF:0.9380 Lamp Flux:2347.73x1 lm		
NAME: HIP_1160_NA_WHT_DEGLARING_HE_500mA_4000K CRI90TYPE:LED		WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding 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	Coefficients of Utilization(CU)															
RCR:Room Cavity Ratio																
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	1.07	1.03	1.00	1.05	1.02	.99	1.01	.98	.96	.97	.95	.93	.93	.92	.90	.88
2.0	.96	.90	.85	.94	.89	.84	.90	.86	.82	.87	.84	.81	.84	.81	.79	.77
3.0	.86	.79	.74	.85	.78	.73	.82	.76	.72	.79	.74	.71	.77	.73	.69	.67
4.0	.78	.70	.65	.77	.70	.64	.74	.68	.63	.72	.67	.62	.70	.65	.62	.60
5.0	.71	.63	.57	.70	.62	.57	.68	.61	.56	.66	.60	.56	.64	.59	.55	.53
6.0	.65	.57	.51	.64	.56	.51	.62	.55	.51	.61	.55	.50	.59	.54	.50	.48
7.0	.59	.52	.46	.59	.51	.46	.57	.51	.46	.56	.50	.45	.55	.49	.45	.43
8.0	.55	.47	.42	.54	.47	.42	.53	.46	.42	.52	.46	.41	.51	.45	.41	.39
9.0	.51	.43	.38	.50	.43	.38	.49	.43	.38	.48	.42	.38	.47	.42	.38	.36
10.0	.47	.40	.35	.47	.40	.35	.46	.40	.35	.45	.39	.35	.44	.39	.35	.33



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JEFF
Test Date:29 January 2024

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity:65.0%
Test Distance:7.890m [K=1.0000]
Remarks:

WEC AND CCEC

Test:U:239.9V I:0.1128A P:25.38W PF:0.9380 Lamp Flux:2347.73x1 lm		
NAME: HIP_1160_NA_WHT_DEGLARING_HE_500mA_4000K CRI90TYPE:LED	WEIGHT:	
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	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	.251	.143	.045	.244	.139	.044	.231	.133	.042	.219	.127	.041	.208	.121	.039		
2.0	.241	.132	.041	.235	.129	.040	.224	.124	.039	.213	.120	.037	.204	.115	.036		
3.0	.227	.121	.036	.222	.119	.036	.212	.115	.035	.203	.111	.034	.194	.108	.033		
4.0	.213	.111	.032	.208	.109	.032	.199	.106	.032	.191	.103	.031	.184	.100	.030		
5.0	.199	.102	.029	.195	.100	.029	.188	.098	.029	.181	.095	.028	.174	.093	.028		
6.0	.187	.094	.027	.184	.093	.027	.177	.091	.026	.170	.089	.026	.164	.087	.026		
7.0	.176	.087	.025	.173	.086	.025	.167	.084	.024	.161	.083	.024	.156	.081	.024		
8.0	.166	.081	.023	.163	.080	.023	.158	.079	.022	.152	.077	.022	.148	.076	.022		
9.0	.157	.076	.021	.154	.075	.021	.149	.074	.021	.145	.073	.021	.140	.071	.021		
10.0	.148	.071	.020	.146	.071	.020	.142	.069	.020	.138	.068	.019	.134	.067	.019		

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	.176	.157	.139	.151	.134	.120	.103	.092	.083	.059	.054	.048	.019	.017	.016	
2.0	.165	.132	.104	.142	.114	.090	.097	.079	.063	.056	.046	.037	.018	.015	.012	
3.0	.156	.114	.080	.134	.098	.070	.092	.068	.049	.053	.040	.029	.017	.013	.009	
4.0	.148	.100	.064	.127	.087	.055	.087	.060	.039	.050	.035	.023	.016	.012	.008	
5.0	.140	.089	.052	.120	.077	.045	.083	.054	.032	.048	.032	.019	.015	.010	.006	
6.0	.133	.081	.043	.115	.070	.037	.079	.049	.026	.046	.029	.016	.015	.009	.005	
7.0	.127	.074	.036	.109	.064	.032	.075	.045	.022	.044	.026	.013	.014	.009	.004	
8.0	.121	.068	.031	.104	.059	.027	.072	.041	.019	.042	.024	.012	.014	.008	.004	
9.0	.115	.063	.027	.099	.054	.024	.069	.038	.017	.040	.023	.010	.013	.007	.003	
10.0	.110	.058	.024	.095	.051	.021	.066	.036	.015	.038	.021	.009	.012	.007	.003	

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JEFF
Test Date:29 January 2024

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity:65.0%
Test Distance:7.890m [K=1.0000]
Remarks:

UGR(Unified Glare Rating) Table

Test:U:239.9V I:0.1128A P:25.38W PF:0.9380 Lamp Flux:2347.73x1 lm										
NAME: HIP_1160_NA_WHT_DEGLARING_HE_500mA_4000K CRI90TYPE:LED								WEIGHT:		
SPEC.:				DIM.:				SERIAL No.:1		
MFR.: DARKON				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	19.1	20.4	19.4	20.6	20.8	18.7	20.0	19.0	20.2	20.4
3H	19.9	21.1	20.2	21.4	21.6	19.6	20.8	19.9	21.0	21.2
4H	20.3	21.4	20.6	21.6	21.9	19.9	21.1	20.2	21.3	21.5
6H	20.4	21.5	20.7	21.7	22.0	20.1	21.2	20.4	21.4	21.7
8H	20.4	21.5	20.8	21.7	22.0	20.1	21.2	20.5	21.4	21.7
12H	20.4	21.4	20.8	21.7	22.0	20.1	21.1	20.5	21.4	21.7
4H 2H	19.4	20.5	19.7	20.8	21.0	19.1	20.2	19.4	20.4	20.7
3H	20.4	21.4	20.8	21.7	22.0	20.1	21.1	20.5	21.4	21.7
4H	20.8	21.7	21.2	22.1	22.4	20.6	21.5	20.9	21.8	22.1
6H	21.1	21.9	21.5	22.2	22.6	20.8	21.6	21.2	22.0	22.3
8H	21.1	21.9	21.5	22.2	22.6	20.9	21.6	21.3	22.0	22.4
12H	21.1	21.8	21.6	22.2	22.6	20.9	21.6	21.3	22.0	22.4
8H 4H	21.0	21.7	21.4	22.1	22.4	20.7	21.4	21.1	21.8	22.2
6H	21.3	21.9	21.7	22.3	22.7	21.1	21.7	21.5	22.1	22.5
8H	21.4	21.9	21.8	22.3	22.8	21.2	21.7	21.6	22.1	22.6
12H	21.4	21.9	21.9	22.3	22.8	21.2	21.7	21.7	22.1	22.6
12H 4H	20.9	21.6	21.4	22.0	22.4	20.7	21.4	21.1	21.7	22.1
6H	21.3	21.8	21.7	22.3	22.7	21.1	21.6	21.5	22.0	22.5
8H	21.4	21.9	21.9	22.3	22.8	21.2	21.7	21.7	22.1	22.6
Variations with the observer position at spacings:										
S = 1.0H	+ 0.5 / - 0.6					+ 0.5 / - 0.6				
1.5H	+ 0.4 / - 0.4					+ 0.2 / - 0.4				
2.0H	+ 1.1 / - 0.7					+ 0.9 / - 0.7				

CIE Pub.117 Corrected 2348 lm Total Lamp Luminous Flux.(8log(F/F0) = 3.0)

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JEFF
Test Date:29 January 2024

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity:65.0%
Test Distance:7.890m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:239.9V I:0.1128A P:25.38W PF:0.9380 Lamp Flux:2347.73x1 lm		
NAME: HIP_1160_NA_WHT_DEGLARING_HE_500mA_4000K CRI90TYPE:LED	WEIGHT:	
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:

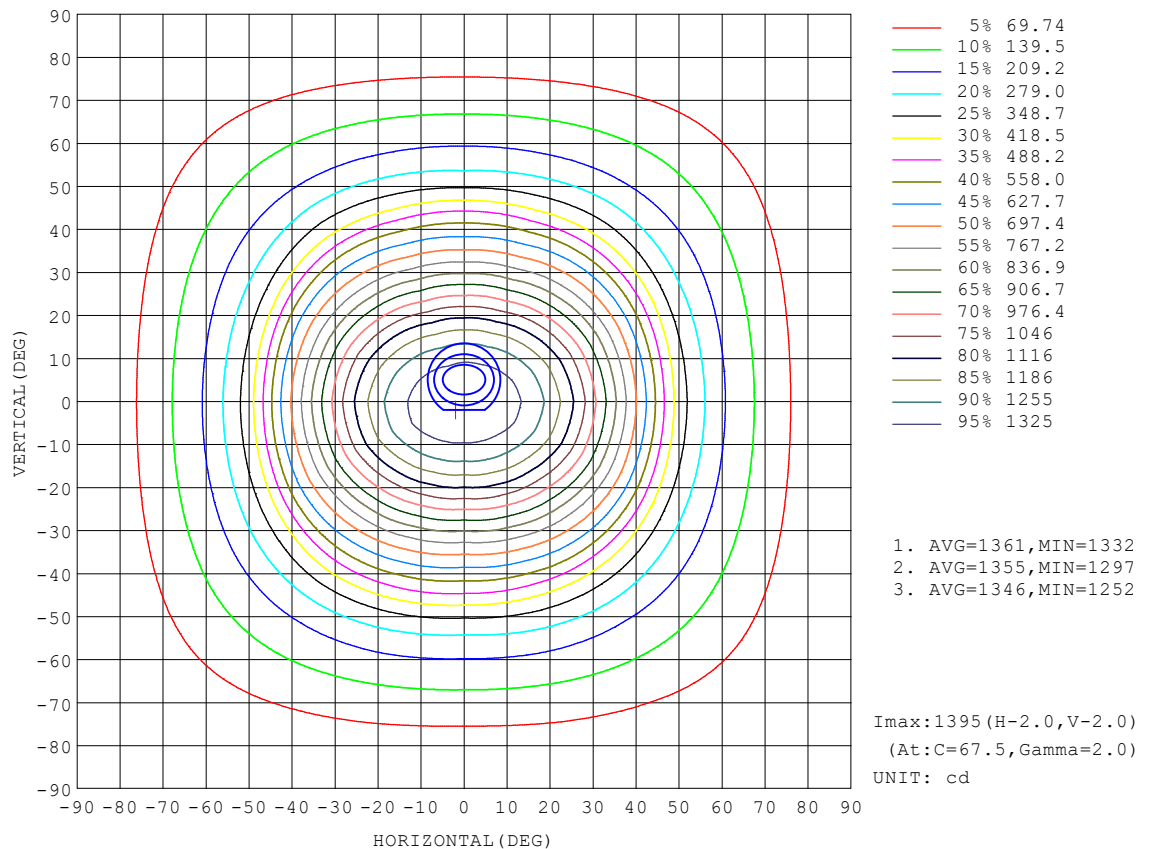
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	68	58	52	67	58	52	66	57	52	46
0.80	77	68	62	76	67	61	75	67	61	55
1.00	85	76	70	84	75	69	82	76	69	63
1.25	91	82	77	90	82	76	87	80	76	69
1.50	95	87	82	94	86	81	91	85	80	74
2.00	101	94	89	99	93	88	96	91	86	80
2.50	104	97	93	102	96	92	98	94	90	83
3.00	106	101	96	104	99	95	100	96	93	86
4.00	109	105	101	107	103	100	103	100	97	89
5.00	111	107	104	109	106	103	105	102	100	91
ROOM INDEX	UF (total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JEFF
Test Date:29 January 2024

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity:65.0%
Test Distance:7.890m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

Test:U:239.9V I:0.1128A P:25.38W PF:0.9380 Lamp Flux:2347.73x1 lm		
NAME: HIP_1160_NA_WHT_DEGLARING_HE_500mA_4000K CRI90TYPE:LED	WEIGHT:	
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:

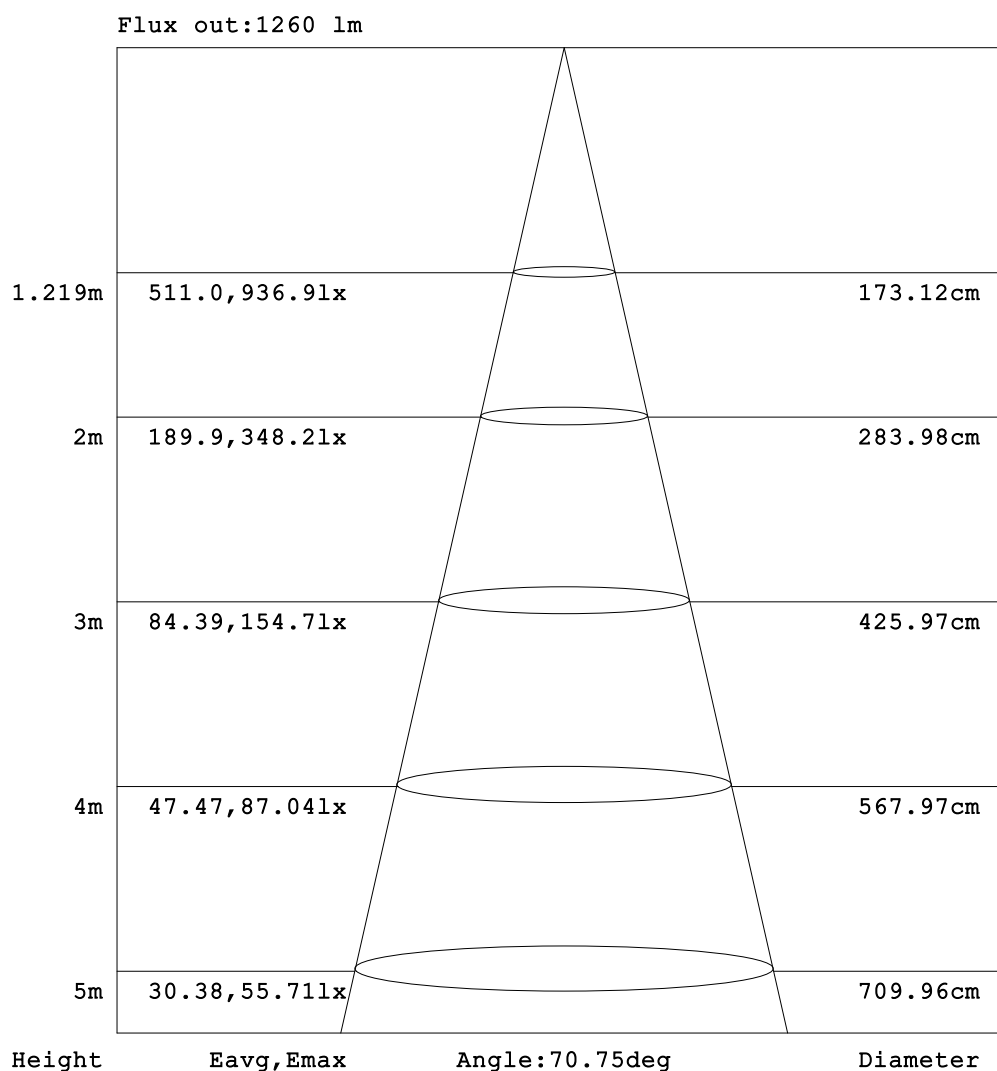


C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JEFF
Test Date:29 January 2024

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity:65.0%
Test Distance:7.890m [K=1.0000]
Remarks:

AAI Figure

Test:U:239.9V I:0.1128A P:25.38W PF:0.9380 Lamp Flux:2347.73x1 lm		
NAME: HIP_1160_NA_WHT_DEGLARING_HE_500mA_4000K CRI90TYPE:LED	WEIGHT:	
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:



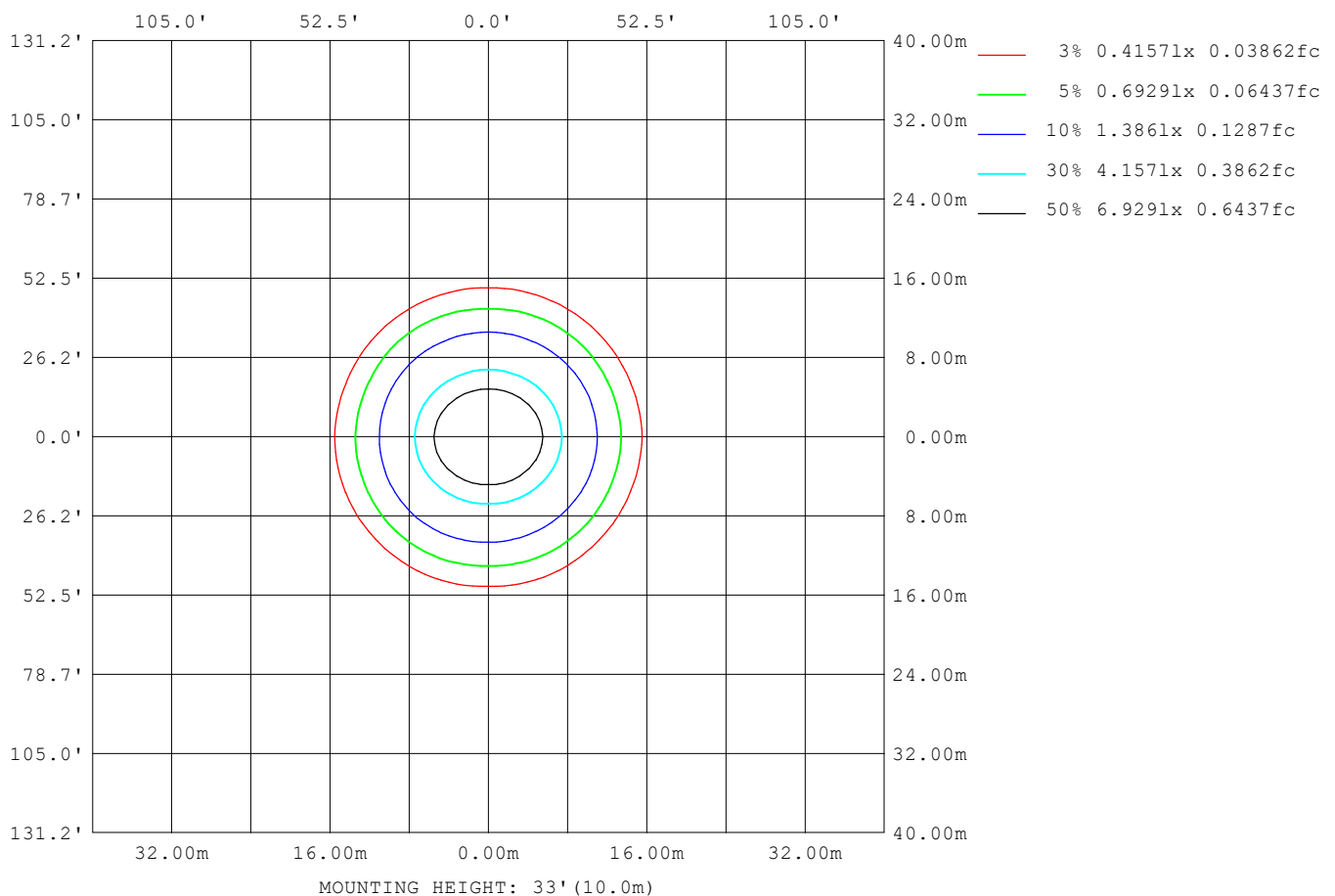
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: JEFF
Test Date: 29 January 2024

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity: 65.0%
Test Distance: 7.890m [K=1.0000]
Remarks:

ISOLUX DIAGRAM

Test:U:239.9V I:0.1128A P:25.38W PF:0.9380 Lamp Flux:2347.73x1 lm		
NAME: HIP_1160_NA_WHT_DEGLARING_HE_500mA_4000K CRI90TYPE:LED	WEIGHT:	
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JEFF
Test Date:29 January 2024

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity:65.0%
Test Distance:7.890m [K=1.0000]
Remarks:

LED Avg.L Report

Test:U:239.9V I:0.1128A P:25.38W PF:0.9380 Lamp Flux:2347.73x1 lm		
NAME: HIP_1160_NA_WHT_DEGLARING_HE_500mA_4000K CRI90TYPE:LED	WEIGHT:	
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:

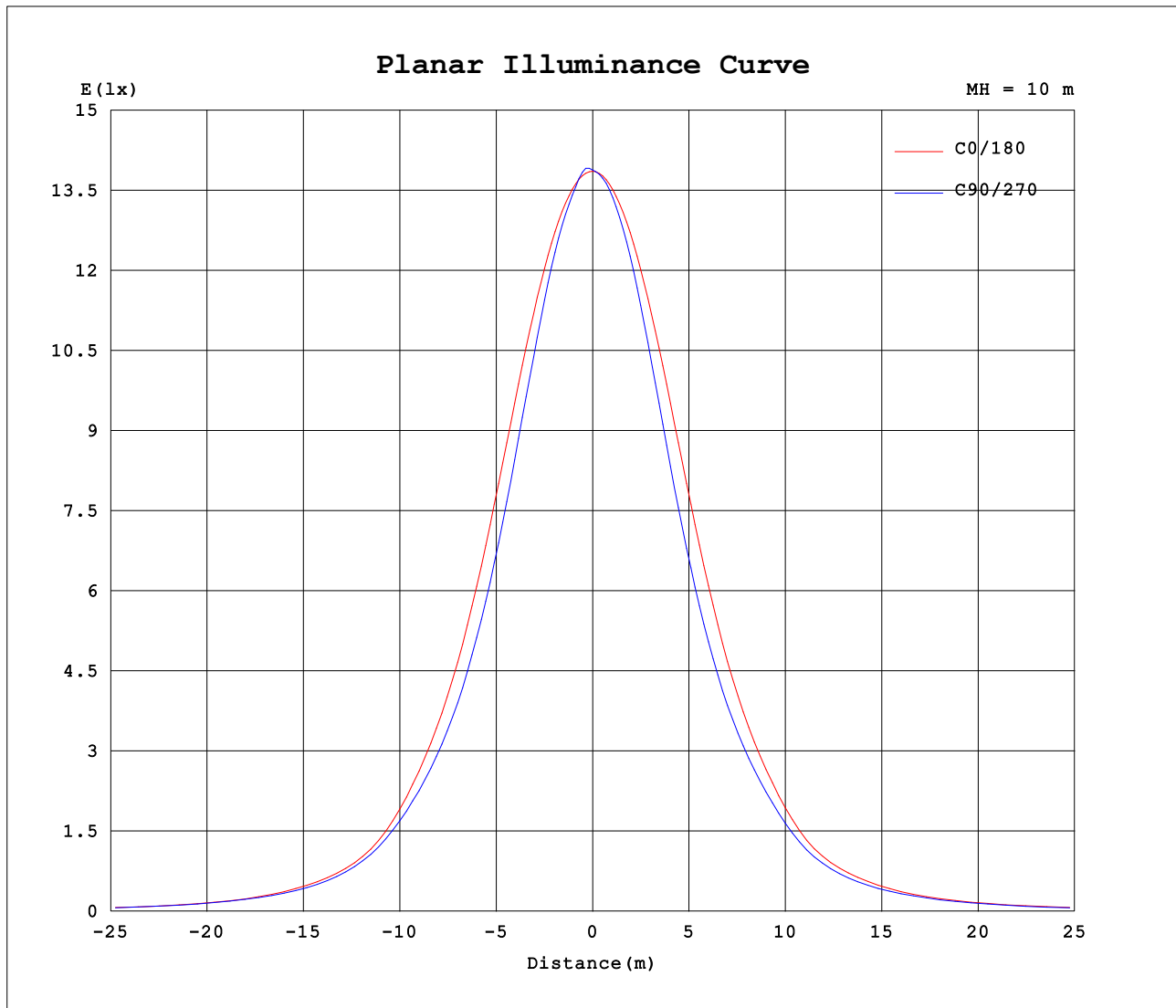
AvgL	cd/m2
L_0~180 (65) av	5675
L_0~180 (75) av	4437
L_0~180 (85) av	1947
L_90~270 (65) av	5390
L_90~270 (75) av	4121
L_90~270 (85) av	2047
L_45 (65) av	5529
L_45 (75) av	4247
L_45 (85) av	2057

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JEFF
Test Date:29 January 2024

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity:65.0%
Test Distance:7.890m [K=1.0000]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: JEFF
Test Date: 29 January 2024

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity: 65.0%
Test Distance: 7.890m [K=1.0000]
Remarks:

