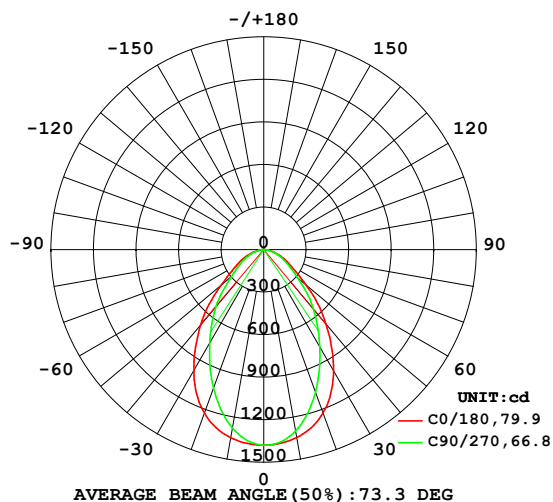


LUMINAIRE PHOTOMETRIC TEST REPORT

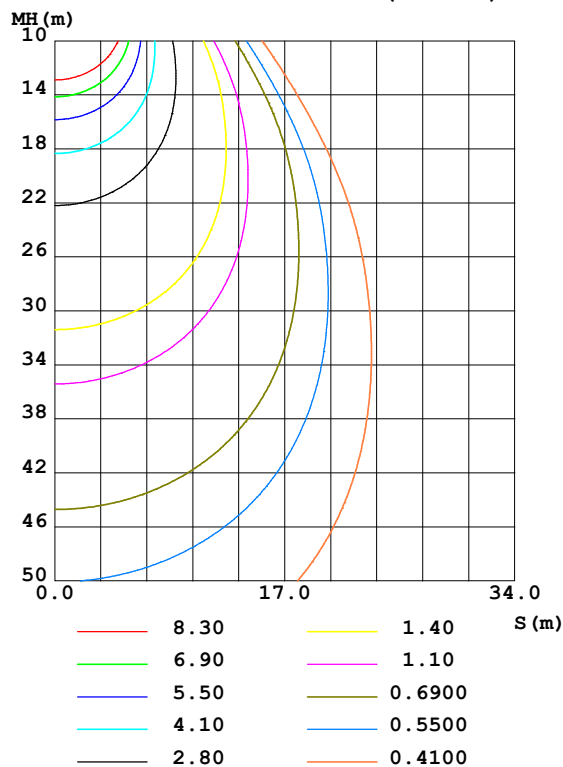
Test:U:239.8V I:0.1153A P:25.72W PF:0.9301 Lamp Flux:2242.27x1 lm		
NAME: MRS T_1160_NA_WHT_DEGLARING_HE_500mA_4000K	CRI:90	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 87.19 lm/W			
LLE 20000mm	1300lm 940 HV ADV6	Imax(cd)	1380	S/MH(C0/180)	1.10
NOMINAL POWER(W)		LOR(%)	100.0	S/MH(C90/270)	0.91
RATED VOLTAGE(V)	230.0	TOTAL FLUX(lm)	2242.3	η UP,DN(C0-180)	0.0,50.7
NOMINAL FLUX(lm)	2242.27	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,49.3
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.00
TEST VOLTAGE(V)	230	η down(%)	100.0	CIBSE SHR MAX	1.10

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:11 February 2025

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity:65.0%
Test Distance:7.891m [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	1345	1319	1298	1330	1347	1312	1277	1301	0- 10	128.7	128.7	5.74,5.74
20	1225	1133	1069	1153	1227	1123	1039	1102	10- 20	346.9	475.6	21.2,21.2
30	985.5	865.6	791.2	890.9	987.7	859.9	762.8	836.0	20- 30	462.3	937.9	41.8,41.8
40	683.6	603.0	546.5	627.4	693.2	603.8	524.8	583.1	30- 40	460.1	1398	62.3,62.3
50	394.1	349.7	316.3	364.2	395.2	346.4	298.5	334.5	40- 50	367.0	1765	78.7,78.7
60	209.6	195.3	186.0	208.6	219.4	198.1	180.1	191.7	50- 60	236.8	2002	89.3,89.3
70	116.5	103.9	101.9	112.2	121.8	109.0	98.71	101.2	60- 70	149.8	2152	96,96
80	36.92	34.74	35.65	39.97	40.22	38.26	34.03	33.30	70- 80	74.31	2226	99.3,99.3
90	0.4474	0.3922	0.4106	1.331	0.4070	0.5572	0.3117	0.3374	80- 90	16.26	2242	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): 1599.1 lm

%lum = 71.3%

%lamp = 71.3%

Conical surface Flux(120deg): 2001.9 lm

%lum = 89.3%

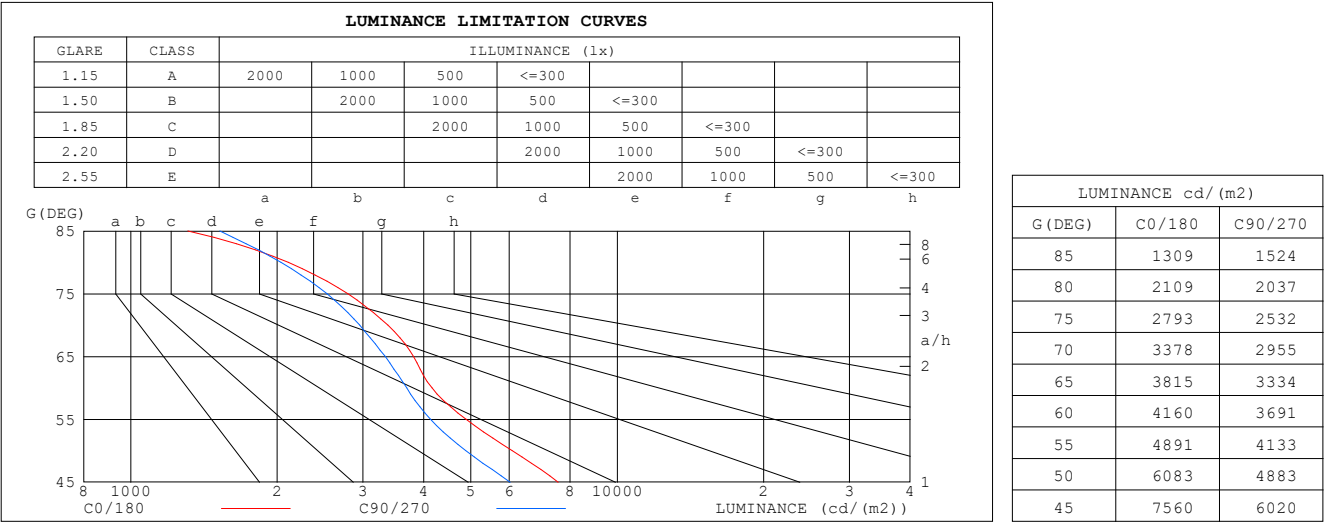
%lamp = 89.3%

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JEFF
Test Date:11 February 2025

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity:65.0%
Test Distance:7.891m [K=1.0000]
Remarks:

LUMINANCE LIMITATION CURVES

Test:U:239.8V I:0.1153A P:25.72W PF:0.9301 Lamp Flux:2242.27x1 lm		
NAME: MRS T_1160_NA_WHT_DEGLARING_HE_500mA_4000K	CRI:90 LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:



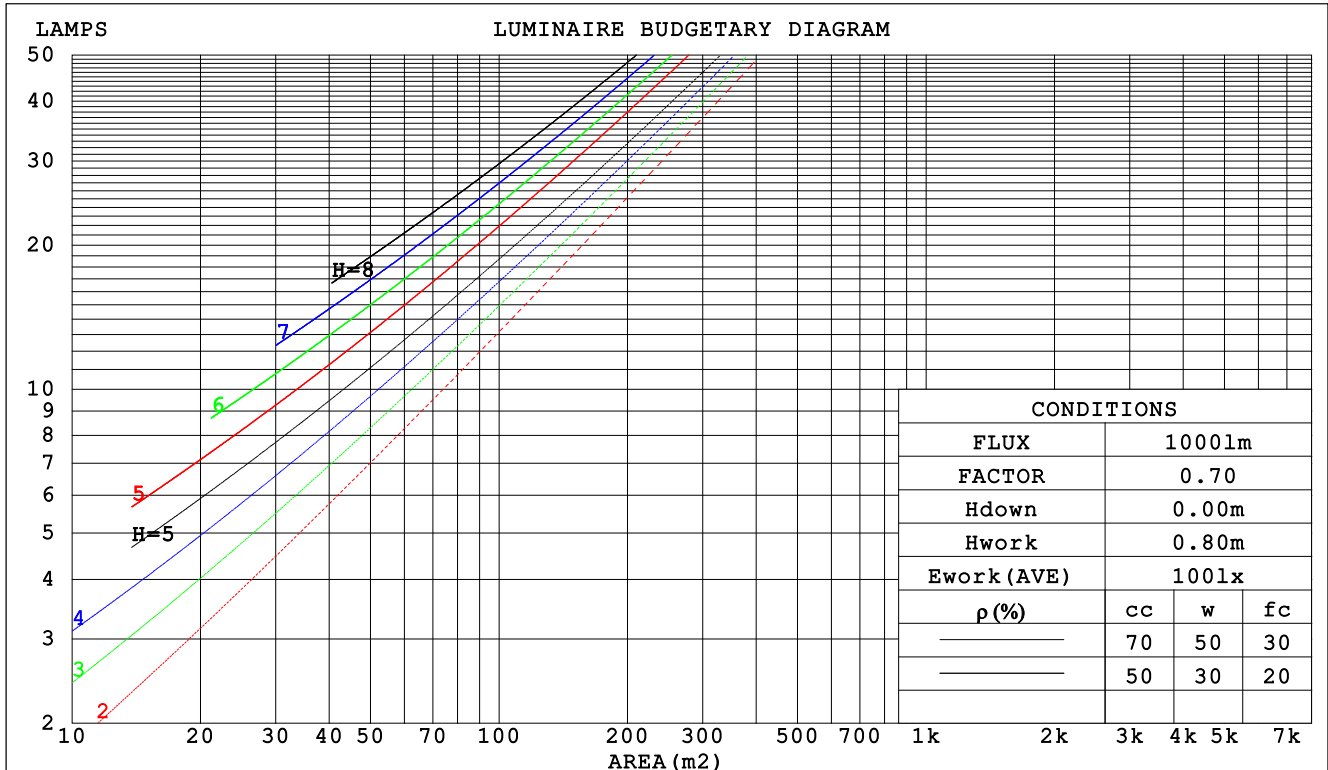
C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JEFF
Test Date:11 February 2025

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity:65.0%
Test Distance:7.891m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:239.8V I:0.1153A P:25.72W PF:0.9301 Lamp Flux:2242.27x1 lm		
NAME: MRS T_1160_NA_WHT_DEGLARING_HE_500mA_4000K CR100E: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	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	.00
1.0	1.07	1.04	1.00	1.05	1.02	.99	1.01	.98	.96	.97	.95	.93	.93	.92	.90	.88
2.0	.96	.90	.86	.94	.89	.85	.91	.86	.83	.87	.84	.81	.85	.82	.79	.77
3.0	.86	.79	.74	.85	.78	.73	.82	.77	.72	.79	.75	.71	.77	.73	.70	.68
4.0	.78	.71	.65	.77	.70	.64	.74	.68	.64	.72	.67	.63	.70	.66	.62	.60
5.0	.71	.63	.58	.70	.63	.57	.68	.62	.57	.66	.61	.56	.64	.60	.56	.54
6.0	.65	.57	.52	.64	.57	.51	.62	.56	.51	.61	.55	.51	.59	.54	.50	.48
7.0	.60	.52	.47	.59	.52	.46	.58	.51	.46	.56	.50	.46	.55	.50	.46	.44
8.0	.55	.48	.42	.55	.47	.42	.53	.47	.42	.52	.46	.42	.51	.46	.42	.40
9.0	.51	.44	.39	.51	.44	.39	.50	.43	.39	.49	.43	.38	.48	.42	.38	.37
10.0	.48	.41	.36	.47	.40	.36	.46	.40	.36	.45	.40	.35	.45	.39	.35	.34



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JEFF
Test Date:11 February 2025

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity:65.0%
Test Distance:7.891m [K=1.0000]
Remarks:

WEC AND CCEC

Test:U:239.8V I:0.1153A P:25.72W PF:0.9301 Lamp Flux:2242.27x1 lm		
NAME: MRS T_1160_NA_WHT_DEGLARING_HE_500mA_4000K	CR100E: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	.250	.142	.045	.243	.139	.044	.230	.132	.042	.218	.126	.040	.207	.120	.039		
2.0	.239	.131	.040	.234	.129	.040	.222	.124	.038	.212	.119	.037	.202	.114	.036		
3.0	.225	.120	.036	.220	.118	.036	.210	.114	.035	.201	.110	.034	.193	.107	.033		
4.0	.211	.110	.032	.207	.108	.032	.198	.105	.031	.190	.102	.031	.183	.099	.030		
5.0	.198	.101	.029	.194	.100	.029	.186	.097	.029	.179	.095	.028	.173	.092	.028		
6.0	.186	.093	.027	.182	.092	.027	.176	.090	.026	.169	.088	.026	.163	.086	.026		
7.0	.175	.086	.025	.172	.086	.024	.166	.084	.024	.160	.082	.024	.155	.080	.024		
8.0	.165	.081	.023	.162	.080	.023	.157	.078	.022	.152	.077	.022	.147	.075	.022		
9.0	.156	.075	.021	.153	.075	.021	.148	.073	.021	.144	.072	.021	.140	.071	.020		
10.0	.148	.071	.020	.145	.070	.020	.141	.069	.019	.137	.068	.019	.133	.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	.093	.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	.081	.134	.098	.070	.092	.068	.049	.053	.040	.029	.017	.013	.009	
4.0	.148	.100	.064	.127	.087	.056	.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	.114	.070	.038	.079	.049	.027	.046	.029	.016	.015	.009	.005	
7.0	.126	.074	.036	.109	.064	.032	.075	.045	.023	.044	.026	.013	.014	.009	.004	
8.0	.120	.068	.031	.104	.059	.027	.072	.041	.019	.042	.024	.012	.013	.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:11 February 2025

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity:65.0%
Test Distance:7.891m [K=1.0000]
Remarks:

UGR(Unified Glare Rating) Table

Test:U:239.8V I:0.1153A P:25.72W PF:0.9301 Lamp Flux:2242.27x1 lm										
NAME: MRS T_1160_NA_WHT_DEGLARING_HE_500mA_4000K CR1000: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	17.7	19.0	18.0	19.2	19.4	16.8	18.1	17.1	18.3	18.5
3H	18.5	19.7	18.8	20.0	20.2	17.7	18.8	17.9	19.1	19.3
4H	18.8	20.0	19.1	20.2	20.5	18.0	19.1	18.3	19.3	19.6
6H	19.0	20.0	19.3	20.3	20.6	18.1	19.2	18.5	19.5	19.7
8H	19.0	20.0	19.3	20.3	20.6	18.2	19.2	18.5	19.5	19.8
12H	19.0	20.0	19.3	20.3	20.6	18.2	19.2	18.5	19.5	19.8
4H 2H	18.0	19.1	18.3	19.3	19.6	17.2	18.3	17.5	18.6	18.8
3H	19.0	19.9	19.3	20.2	20.5	18.2	19.2	18.5	19.5	19.8
4H	19.4	20.2	19.7	20.6	20.9	18.6	19.5	19.0	19.8	20.1
6H	19.6	20.4	20.0	20.7	21.1	18.9	19.7	19.3	20.0	20.4
8H	19.6	20.4	20.0	20.7	21.1	19.0	19.7	19.4	20.1	20.4
12H	19.7	20.3	20.1	20.7	21.1	19.0	19.7	19.4	20.0	20.4
8H 4H	19.4	20.2	19.8	20.5	20.9	18.8	19.5	19.2	19.8	20.2
6H	19.8	20.4	20.2	20.8	21.2	19.1	19.7	19.6	20.1	20.5
8H	19.8	20.4	20.3	20.8	21.3	19.2	19.8	19.7	20.2	20.6
12H	19.9	20.3	20.4	20.8	21.3	19.3	19.8	19.8	20.2	20.7
12H 4H	19.4	20.1	19.8	20.5	20.9	18.7	19.4	19.2	19.8	20.2
6H	19.8	20.3	20.2	20.7	21.2	19.1	19.7	19.6	20.1	20.5
8H	19.9	20.3	20.3	20.8	21.2	19.3	19.7	19.7	20.2	20.6
Variations with the observer position at spacings:										
S = 1.0H	+ 0.5 / - 0.6					+ 0.5 / - 0.6				
1.5H	+ 0.4 / - 0.4					+ 0.3 / - 0.4				
2.0H	+ 1.2 / - 0.8					+ 0.9 / - 0.6				

CIE Pub.117 Corrected 2242 lm Total Lamp Luminous Flux. (8log(F/F0) = 2.8)

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JEFF
Test Date:11 February 2025

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity:65.0%
Test Distance:7.891m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:239.8V I:0.1153A P:25.72W PF:0.9301 Lamp Flux:2242.27x1 lm		
NAME: MRS T_1160_NA_WHT_DEGLARING_HE_500mA_4000K	CR100E:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:

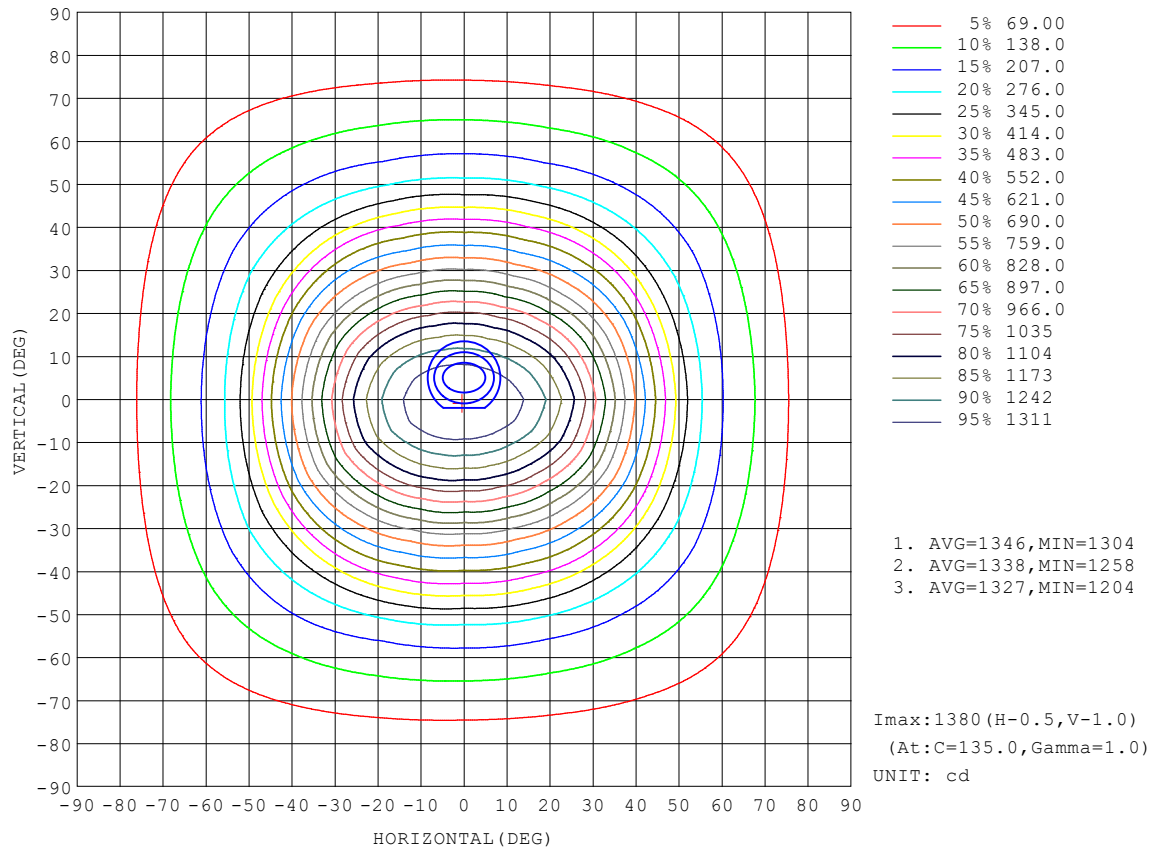
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	68	58	52	67	58	52	66	58	52	47
0.80	78	68	62	77	68	62	75	67	62	56
1.00	85	76	70	84	76	70	82	76	69	63
1.25	91	83	77	90	82	77	87	81	76	70
1.50	95	88	82	94	87	82	91	85	80	74
2.00	101	94	89	99	93	88	96	91	87	80
2.50	104	98	93	102	96	92	98	94	90	83
3.00	106	101	97	104	99	96	101	97	93	86
4.00	109	105	101	107	103	100	103	100	97	89
5.00	111	108	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:11 February 2025

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity:65.0%
Test Distance:7.891m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

Test:U:239.8V I:0.1153A P:25.72W PF:0.9301 Lamp Flux:2242.27x1 lm		
NAME: MRS T_1160_NA_WHT_DEGLARING_HE_500mA_4000K	CRI:90 LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:

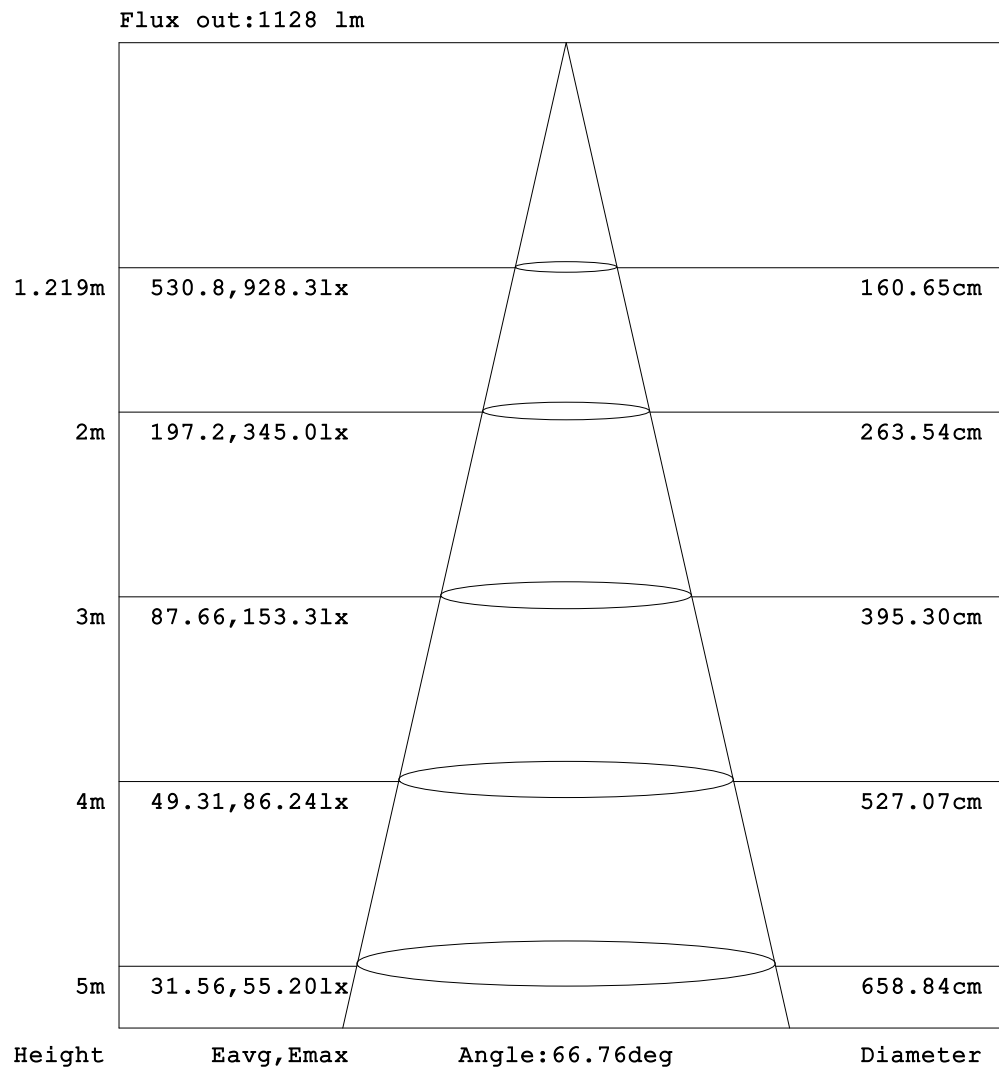


C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: JEFF
Test Date: 11 February 2025

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity: 65.0%
Test Distance: 7.891m [K=1.0000]
Remarks:

AAI Figure

Test:U:239.8V I:0.1153A P:25.72W PF:0.9301 Lamp Flux:2242.27x1 lm		
NAME: MRS T_1160_NA_WHT_DEGLARING_HE_500mA_4000K	CR100E:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:



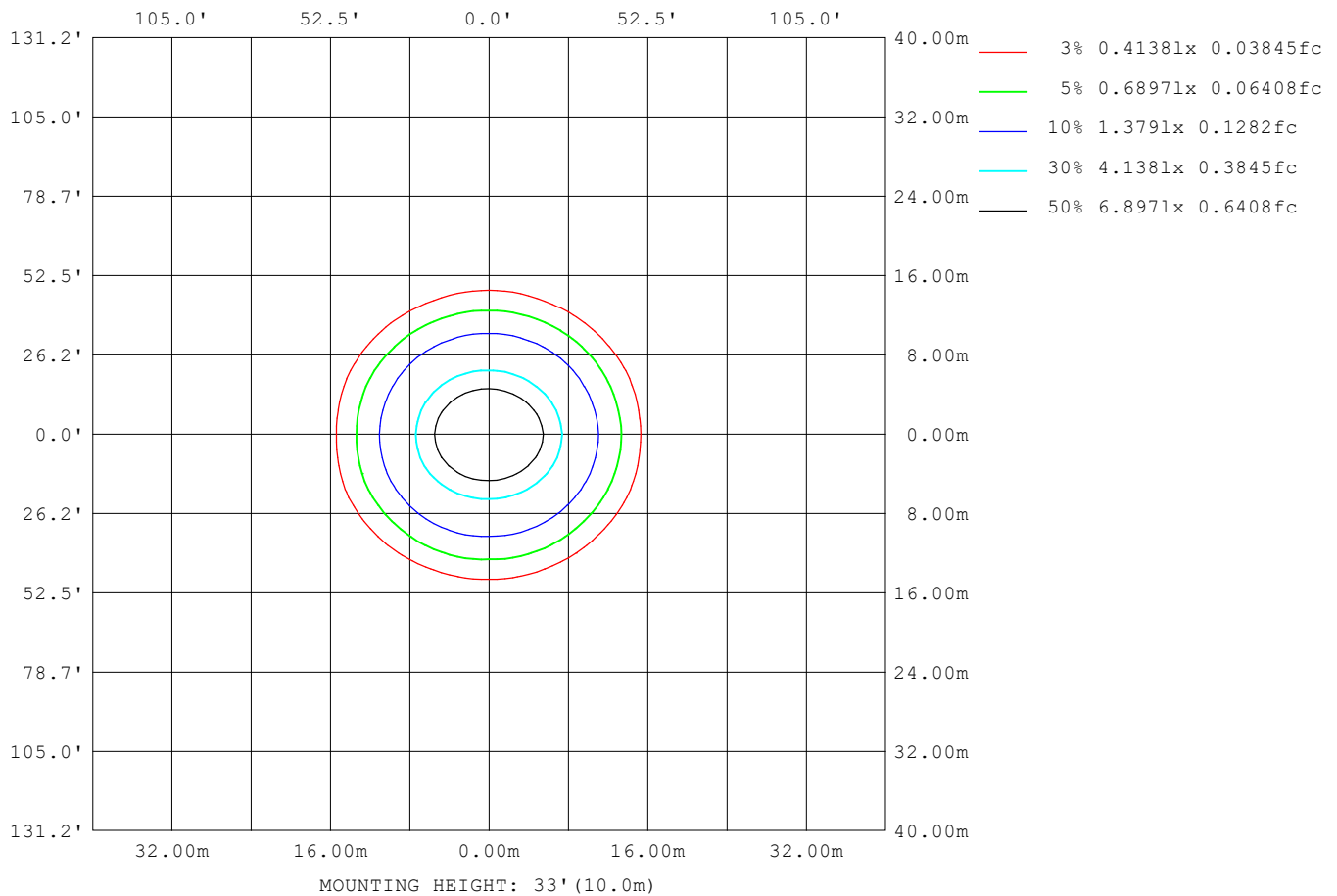
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JEFF
Test Date:11 February 2025

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity:65.0%
Test Distance:7.891m [K=1.0000]
Remarks:

ISOLUX DIAGRAM

Test:U:239.8V I:0.1153A P:25.72W PF:0.9301 Lamp Flux:2242.27x1 lm		
NAME: MRS T_1160_NA_WHT_DEGLARING_HE_500mA_4000K CR100E:LED	CR100E: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:11 February 2025

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity:65.0%
Test Distance:7.891m [K=1.0000]
Remarks:

LED Avg.L Report

Test:U:239.8V I:0.1153A P:25.72W PF:0.9301 Lamp Flux:2242.27x1 lm		
NAME: MRS T_1160_NA_WHT_DEGLARING_HE_500mA_4000K	CR100:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:

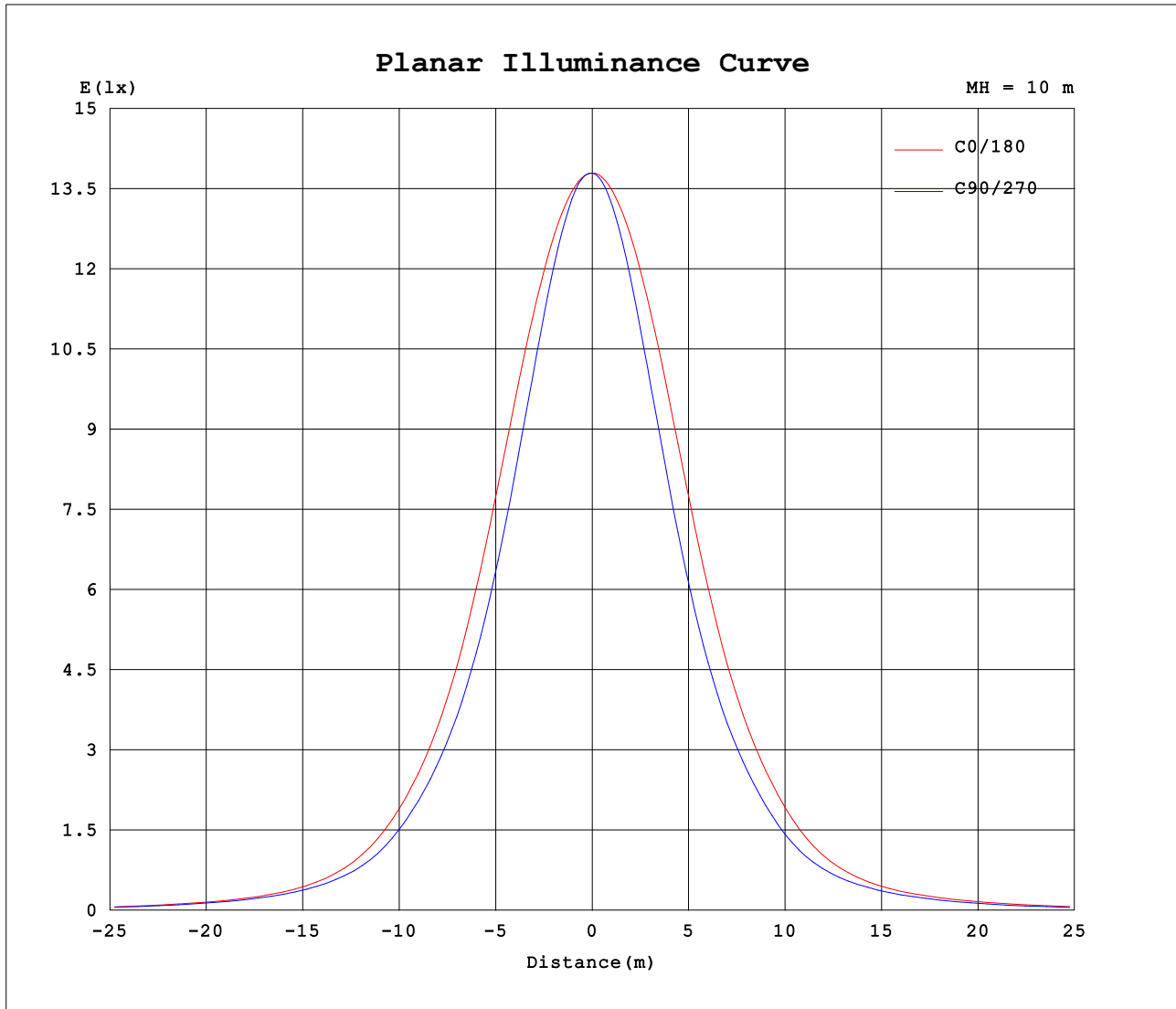
AvgL	cd/m2
L_0~180 (65) av	3885
L_0~180 (75) av	2895
L_0~180 (85) av	1389
L_90~270 (65) av	3283
L_90~270 (75) av	2484
L_90~270 (85) av	1469
L_45 (65) av	3480
L_45 (75) av	2638
L_45 (85) av	1514

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JEFF
Test Date:11 February 2025

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity:65.0%
Test Distance:7.891m [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: 11 February 2025

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity: 65.0%
Test Distance: 7.891m [K=1.0000]
Remarks:

```

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity:65.0%
Test Distance:7.891m [K=1.0000]
Remarks:

```