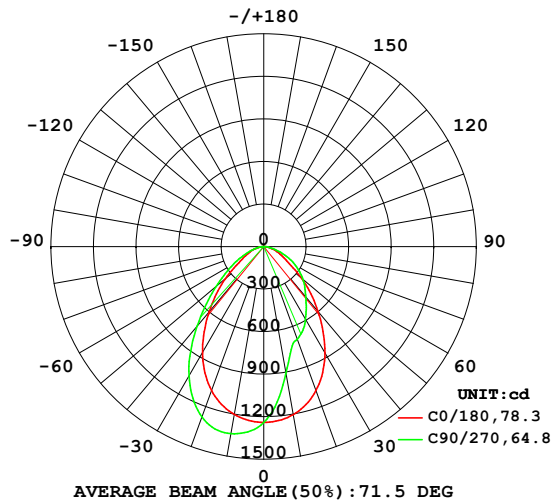


LUMINAIRE PHOTOMETRIC TEST REPORT

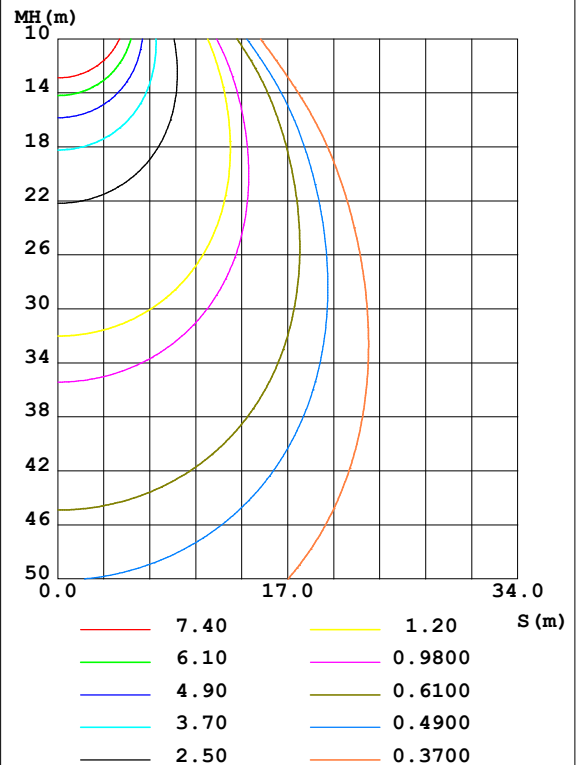
Test:U:239.8V I:0.1153A P:25.73W PF:0.9302 Lamp Flux:2382.77x1 lm		
NAME: MRS T_1160_NA_WHT_ASYMMETRIC_HE_500mA_4000K CIPSE:LED	WEIGHT:	
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 92.60 lm/W			
LLE 20000mm 1300lm 940 HV ADV6		Imax(cd)	1341	S/MH(C0/180)	1.08
NOMINAL POWER(W)		LOR(%)	100.0	S/MH(C90/270)	1.22
RATED VOLTAGE(V)	230.0	TOTAL FLUX(lm)	2382.8	η UP,DN(C0-180)	0.0,40.6
NOMINAL FLUX(lm)	2382.77	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,59.4
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	1203	992.0	908.6	1009	1202	1318	1339	1307	0- 10	114.4	114.4	4.8,4.8
20	1080	709.8	696.0	720.1	1079	1297	1278	1276	10- 20	306.1	420.5	17.6,17.6
30	863.5	632.6	590.8	631.7	864.8	1168	1055	1136	20- 30	434.7	855.2	35.9,35.9
40	596.4	531.0	462.8	534.8	599.2	932.6	730.5	894.9	30- 40	478.3	1334	56,56
50	352.0	392.3	363.0	398.9	355.9	624.7	439.4	590.1	40- 50	429.6	1763	74,74
60	171.1	254.9	252.9	260.9	172.7	351.4	243.3	327.6	50- 60	318.9	2082	87.4,87.4
70	94.94	129.8	135.5	136.3	96.16	162.5	113.5	148.0	60- 70	195.6	2278	95.6,95.6
80	33.16	39.41	42.99	43.91	34.48	48.35	36.41	41.77	70- 80	87.11	2365	99.2,99.2
90	0.4475	0.5089	0.4955	1.823	0.4364	0.6933	0.4037	0.4256	80- 90	18.05	2383	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): 1559.3 lm

%lum = 65.4%

%lamp = 65.4%

Conical surface Flux(120deg): 2082 lm

%lum = 87.4%

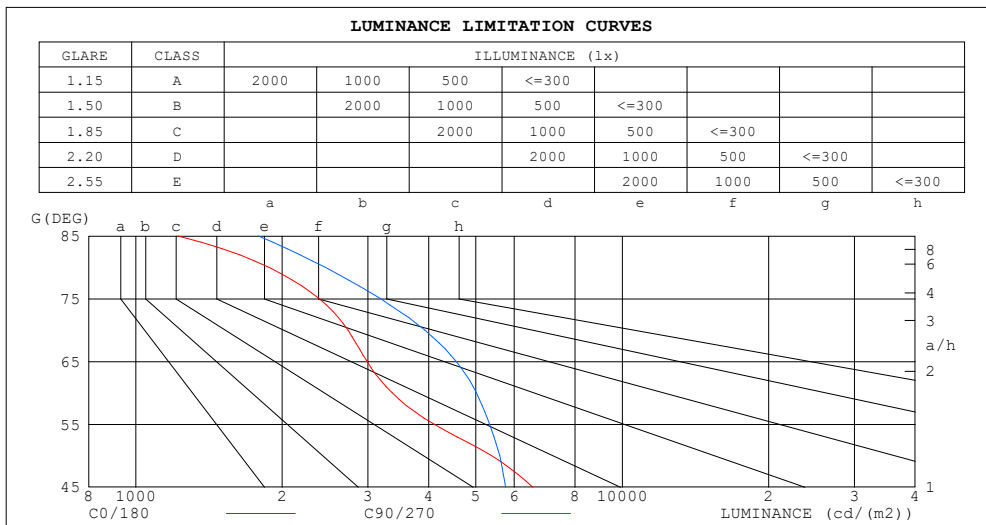
%lamp = 87.4%

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:25.73W PF:0.9302 Lamp Flux:2382.77x1 lm		
NAME: MRS T_1160_NA_WHT_ASYMMETRIC_HE_500mA_4000K CRI:90 LED	WEIGHT:	
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	1220	1787
80	1879	2454
75	2383	3187
70	2730	3928
65	2991	4560
60	3366	5014
55	4107	5338
50	5386	5597
45	6551	5758

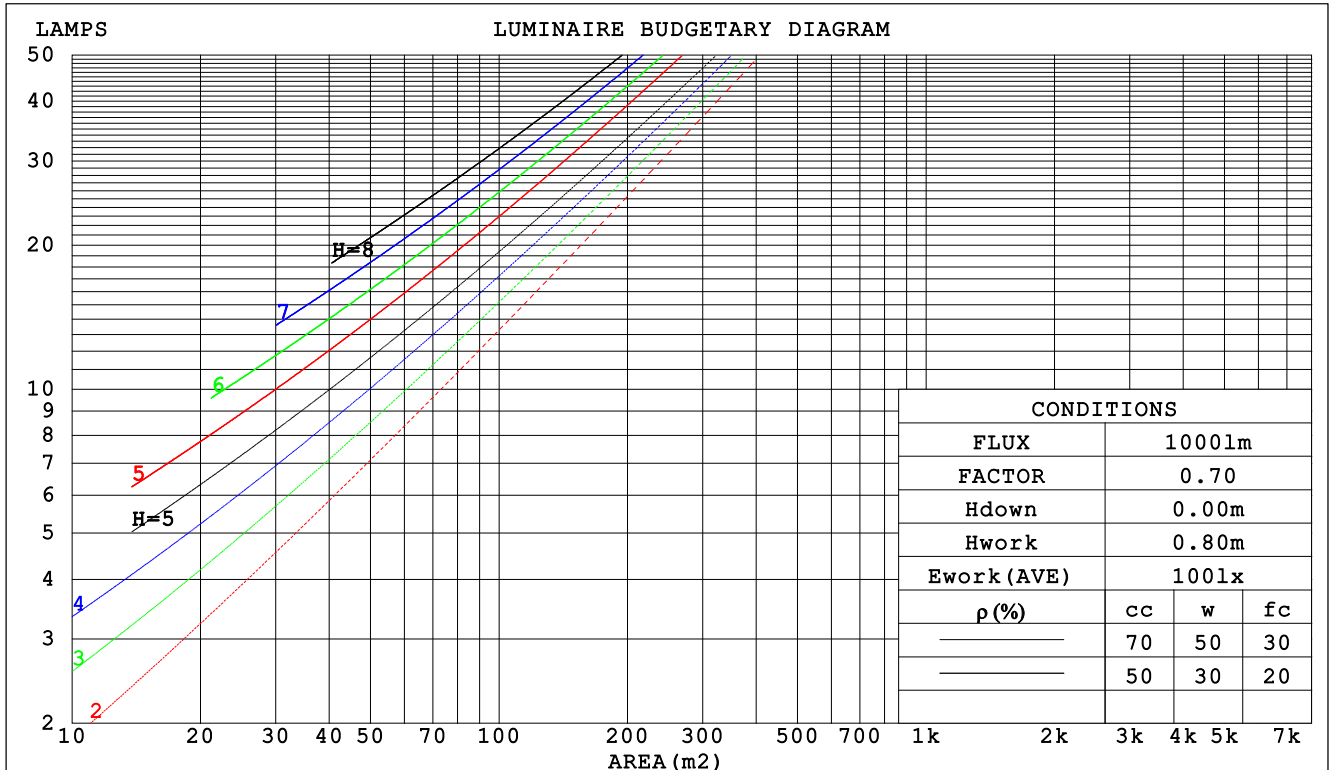
C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JEFF
Test Date:11 February 2025

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:25.73W PF:0.9302 Lamp Flux:2382.77x1 lm		
NAME: MRS T_1160_NA_WHT_ASYMMETRIC_HE_500mA_4000K CRY: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	1.06	1.03	.99	1.04	1.01	.98	.90	.97	.95	.96	.94	.92	.93	.91	.89	.87
2.0	.94	.89	.84	.93	.87	.83	.89	.85	.81	.86	.82	.79	.83	.80	.77	.75
3.0	.84	.77	.71	.83	.76	.71	.80	.74	.69	.77	.72	.68	.75	.71	.67	.65
4.0	.76	.68	.62	.74	.67	.61	.72	.66	.61	.70	.64	.60	.68	.63	.59	.57
5.0	.68	.60	.54	.67	.60	.54	.65	.59	.53	.63	.57	.53	.62	.56	.52	.50
6.0	.62	.54	.48	.61	.53	.48	.60	.53	.47	.58	.52	.47	.56	.51	.47	.45
7.0	.57	.49	.43	.56	.48	.43	.55	.48	.43	.53	.47	.42	.52	.46	.42	.40
8.0	.52	.44	.39	.52	.44	.39	.50	.43	.38	.49	.43	.38	.48	.42	.38	.36
9.0	.48	.41	.35	.48	.40	.35	.47	.40	.35	.45	.39	.35	.45	.39	.35	.33
10.0	.45	.37	.32	.44	.37	.32	.43	.37	.32	.42	.36	.32	.41	.36	.32	.30



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:25.73W PF:0.9302 Lamp Flux:2382.77x1 lm		
NAME: MRS T_1160_NA_WHT_ASYMMETRIC_HE_500mA_4000K CRYSTAL: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	.263	.150	.047	.256	.146	.046	.243	.139	.045	.231	.133	.043	.220	.128	.041		
2.0	.253	.139	.043	.247	.136	.042	.236	.131	.041	.225	.126	.040	.215	.122	.038		
3.0	.238	.127	.038	.233	.125	.038	.223	.121	.037	.214	.117	.036	.205	.114	.035		
4.0	.223	.116	.034	.218	.114	.034	.209	.111	.033	.201	.108	.033	.194	.105	.032		
5.0	.208	.106	.031	.204	.105	.031	.197	.102	.030	.189	.100	.030	.183	.098	.029		
6.0	.195	.098	.028	.192	.097	.028	.185	.095	.028	.178	.093	.027	.172	.091	.027		
7.0	.183	.091	.026	.180	.090	.026	.174	.088	.025	.168	.086	.025	.162	.084	.025		
8.0	.172	.084	.024	.169	.083	.024	.164	.082	.023	.159	.080	.023	.154	.079	.023		
9.0	.162	.079	.022	.160	.078	.022	.155	.077	.022	.150	.075	.022	.146	.074	.021		
10.0	.154	.074	.020	.151	.073	.020	.147	.072	.020	.142	.071	.020	.138	.070	.020		

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	.177	.157	.138	.152	.134	.119	.104	.092	.082	.060	.053	.048	.019	.017	.015	
2.0	.167	.132	.103	.143	.114	.089	.098	.079	.062	.057	.046	.036	.018	.015	.012	
3.0	.158	.114	.079	.136	.098	.068	.093	.068	.048	.054	.040	.028	.017	.013	.009	
4.0	.150	.100	.062	.129	.087	.054	.089	.060	.038	.051	.035	.023	.017	.012	.007	
5.0	.143	.090	.050	.123	.078	.044	.085	.054	.031	.049	.032	.018	.016	.010	.006	
6.0	.136	.081	.042	.117	.070	.036	.081	.049	.026	.047	.029	.015	.015	.009	.005	
7.0	.130	.074	.035	.111	.064	.031	.077	.045	.022	.045	.027	.013	.014	.009	.004	
8.0	.123	.068	.030	.106	.059	.027	.074	.042	.019	.043	.025	.011	.014	.008	.004	
9.0	.118	.063	.027	.101	.055	.023	.070	.039	.016	.041	.023	.010	.013	.007	.003	
10.0	.112	.059	.024	.097	.051	.021	.067	.036	.015	.039	.021	.009	.013	.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:25.73W PF:0.9302 Lamp Flux:2382.77x1 lm										
NAME: MRS T_1160_NA_WHT_ASYMMETRIC_HE_500mA_4000K CRI:90 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	17.2	18.5	17.4	18.7	18.9	17.5	18.9	17.8	19.1	19.3
3H	18.0	19.3	18.3	19.5	19.7	18.6	19.9	18.9	20.1	20.3
4H	18.3	19.5	18.6	19.7	20.0	19.0	20.2	19.3	20.4	20.7
6H	18.4	19.5	18.7	19.8	20.1	19.2	20.3	19.5	20.6	20.8
8H	18.4	19.5	18.8	19.8	20.1	19.2	20.3	19.5	20.6	20.8
12H	18.4	19.4	18.7	19.7	20.0	19.2	20.3	19.6	20.5	20.8
4H 2H	17.7	18.9	18.0	19.2	19.4	18.0	19.2	18.3	19.4	19.7
3H	18.8	19.8	19.1	20.1	20.4	19.3	20.3	19.6	20.6	20.9
4H	19.1	20.1	19.5	20.4	20.7	19.7	20.6	20.1	21.0	21.3
6H	19.4	20.2	19.7	20.5	20.9	20.0	20.8	20.4	21.2	21.5
8H	19.4	20.2	19.8	20.5	20.9	20.0	20.8	20.4	21.2	21.6
12H	19.4	20.1	19.8	20.5	20.9	20.1	20.8	20.5	21.2	21.6
8H 4H	19.3	20.1	19.7	20.4	20.8	19.8	20.6	20.2	21.0	21.3
6H	19.6	20.2	20.0	20.6	21.1	20.2	20.8	20.6	21.2	21.6
8H	19.7	20.3	20.1	20.7	21.1	20.3	20.8	20.7	21.3	21.7
12H	19.7	20.2	20.2	20.7	21.1	20.4	20.8	20.8	21.3	21.8
12H 4H	19.3	20.0	19.7	20.4	20.8	19.8	20.5	20.2	20.9	21.3
6H	19.6	20.2	20.1	20.6	21.1	20.2	20.7	20.6	21.2	21.6
8H	19.7	20.2	20.2	20.7	21.1	20.3	20.8	20.8	21.2	21.7
Variations with the observer position at spacings:										
S = 1.0H	+ 0.3 / - 0.5					+ 0.3 / - 0.3				
1.5H	+ 0.3 / - 0.4					+ 0.2 / - 0.4				
2.0H	+ 0.4 / - 1.5					+ 0.3 / - 0.3				

CIE Pub.117 Corrected 2383 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: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:25.73W PF:0.9302 Lamp Flux:2382.77x1 lm		
NAME: MRS T_1160_NA_WHT_ASYMMETRIC_HE_500mA_4000K CRYSTAL:LED	WEIGHT:	
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:

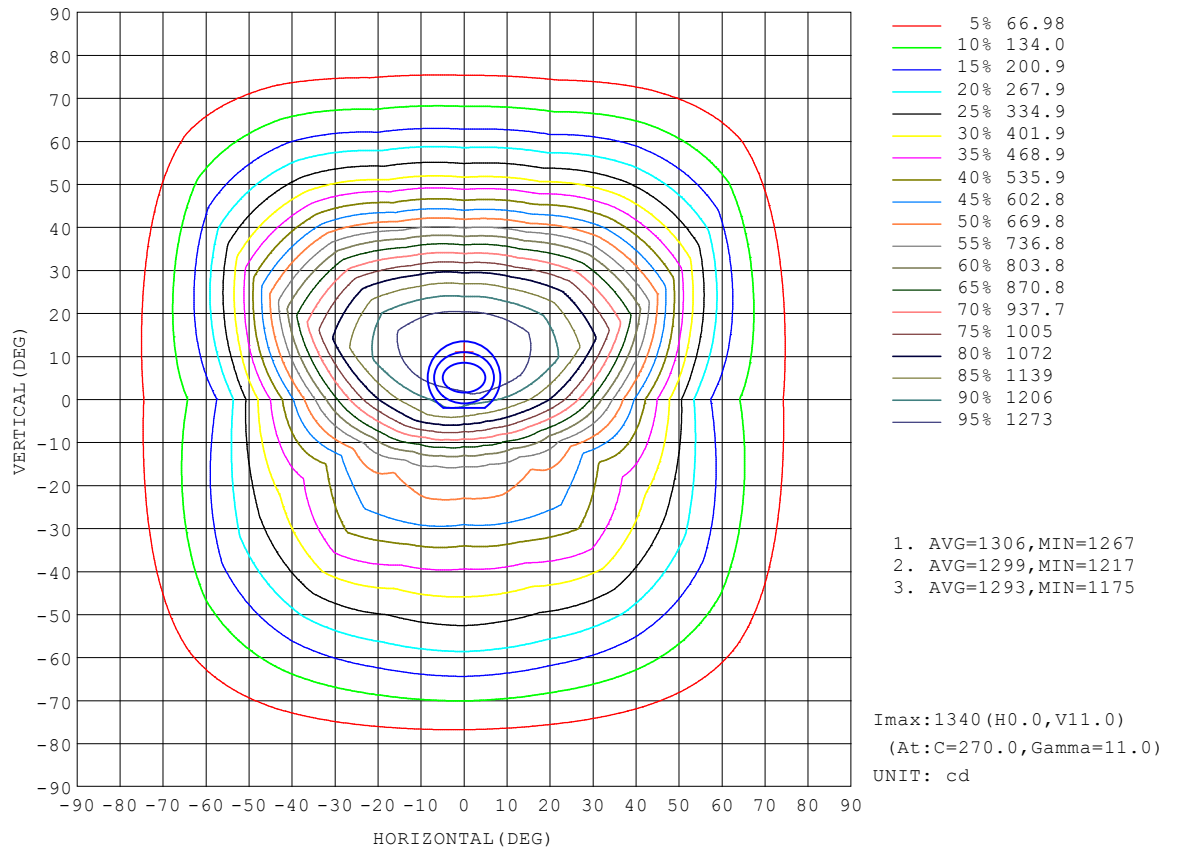
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	64	54	47	63	53	47	62	53	47	41
0.80	74	64	57	73	63	57	71	63	57	50
1.00	82	72	66	81	72	66	79	73	65	59
1.25	89	80	74	87	79	73	85	78	72	66
1.50	93	85	79	92	84	78	89	82	77	71
2.00	99	92	86	97	91	86	94	89	84	77
2.50	102	96	91	100	94	90	97	92	88	80
3.00	105	99	95	103	98	94	99	95	92	84
4.00	109	104	100	106	102	99	102	99	96	88
5.00	111	107	103	108	105	102	104	101	99	90
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:25.73W PF:0.9302 Lamp Flux:2382.77x1 lm		
NAME: MRS T_1160_NA_WHT_ASYMMETRIC_HE_500mA_4000K CREE:LED	WEIGHT:	
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:

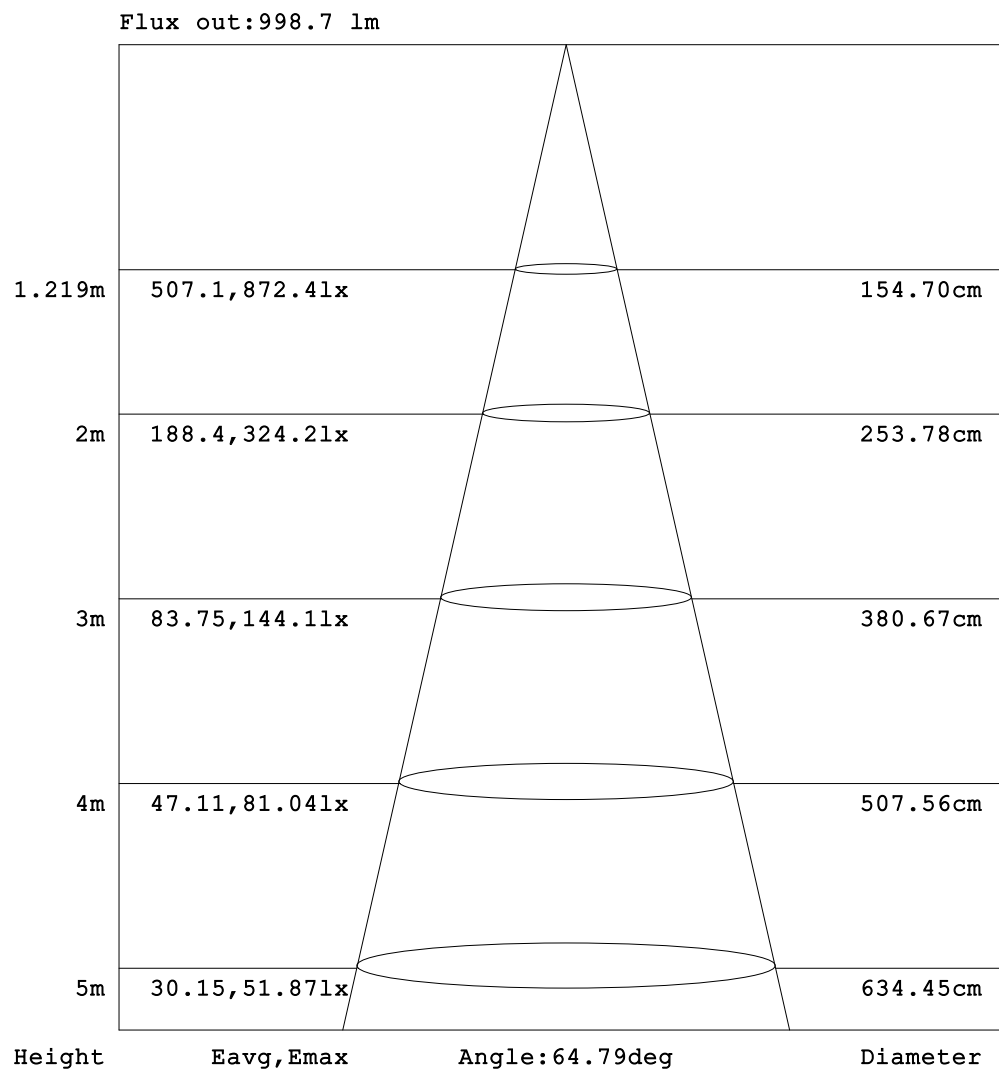


C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JEFF
Test Date:11 February 2025

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:25.73W PF:0.9302 Lamp Flux:2382.77x1 lm		
NAME: MRS T_1160_NA_WHT_ASYMMETRIC_HE_500mA_4000K CRI:90 LED	WEIGHT:	
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:



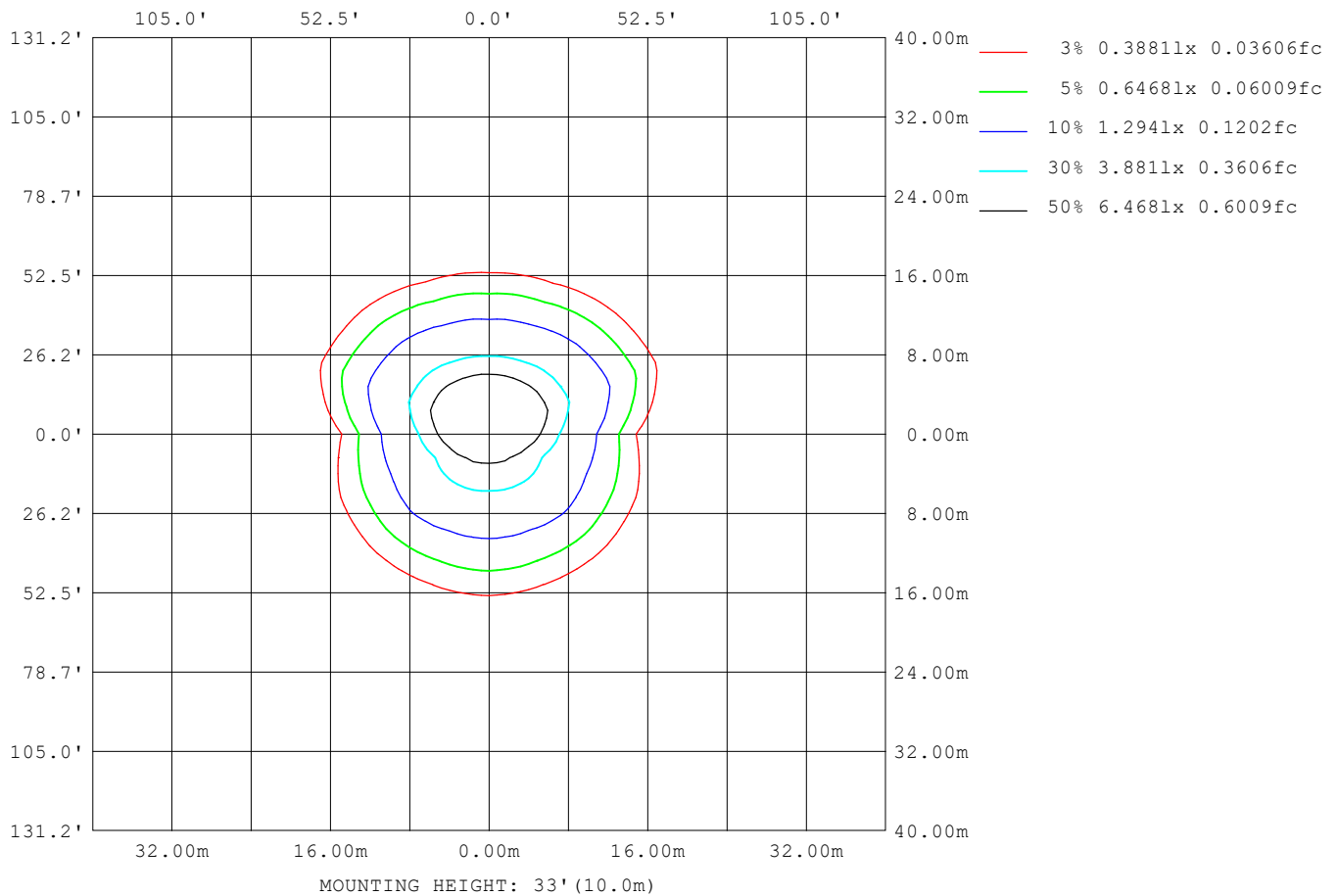
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:25.73W PF:0.9302 Lamp Flux:2382.77x1 lm		
NAME: MRS T_1160_NA_WHT_ASYMMETRIC_HE_500mA_4000K CRYSTAL: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:25.73W PF:0.9302 Lamp Flux:2382.77x1 lm		
NAME: MRS T_1160_NA_WHT_ASYMMETRIC_HE_500mA_4000K CRYSTAL:LED	WEIGHT:	
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:

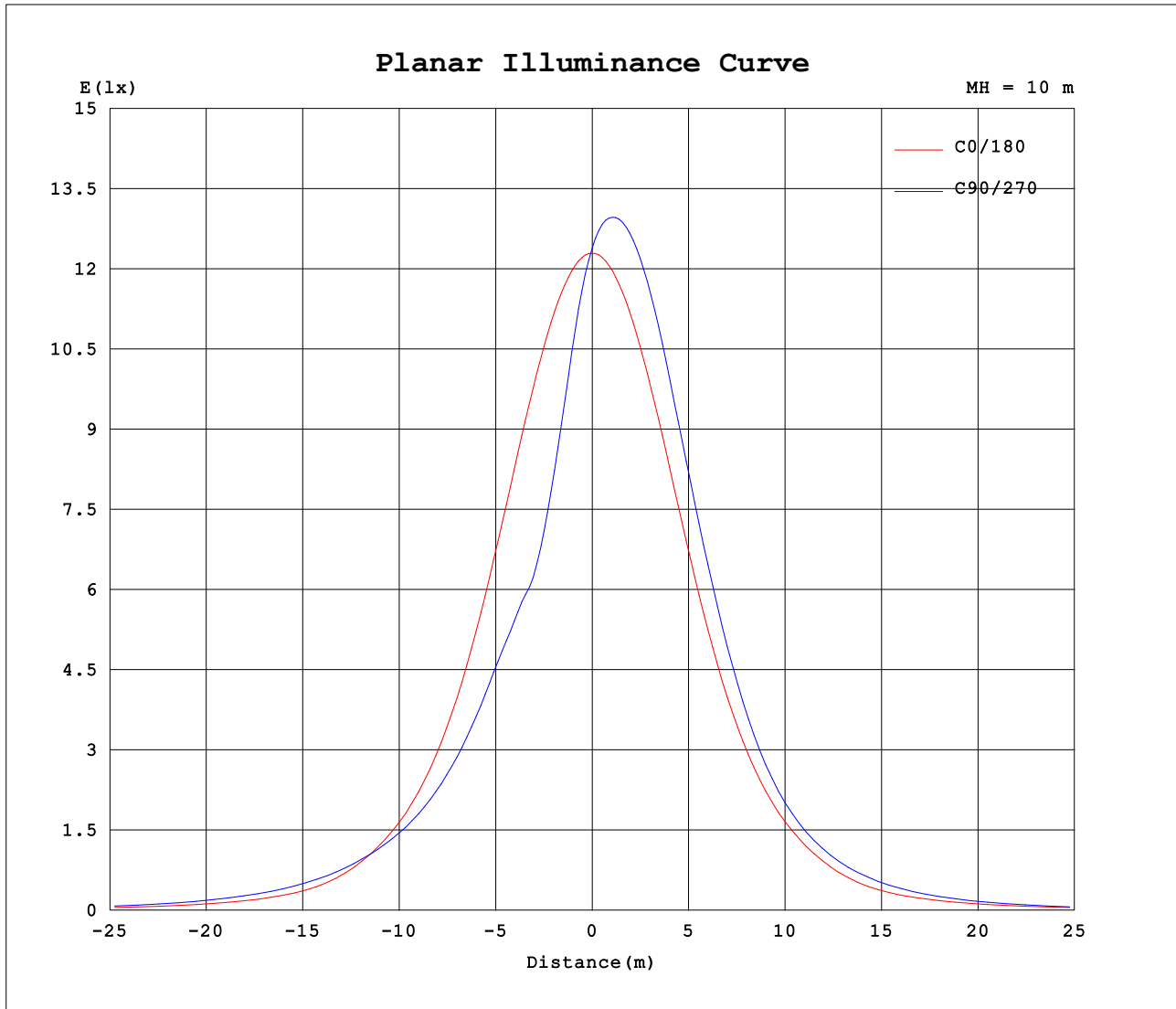
AvgL	cd/m2
L_0~180 (65) av	3029
L_0~180 (75) av	2431
L_0~180 (85) av	1269
L_90~270 (65) av	4288
L_90~270 (75) av	2923
L_90~270 (85) av	1655
L_45 (65) av	5072
L_45 (75) av	3292
L_45 (85) av	1747

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:

```