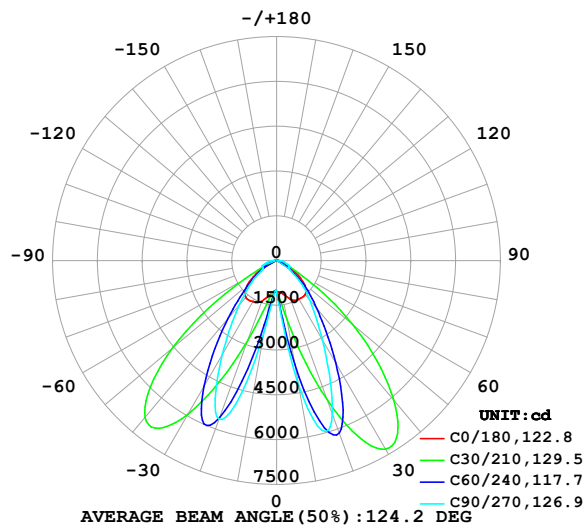


LUMINAIRE PHOTOMETRIC TEST REPORT

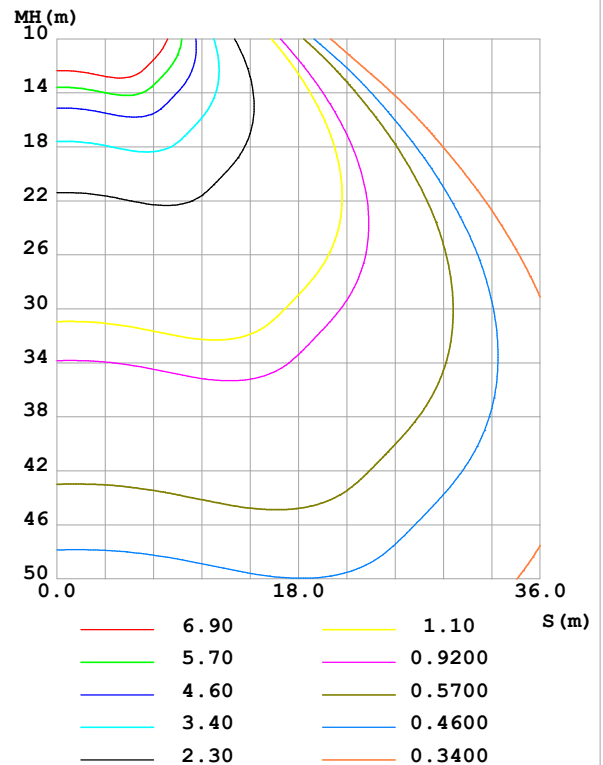
Test:U:229.50V I:0.254A P:57.6W PF:0.986 Freq:49.99Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:11086x1 lm		
NAME: 2853-RL20*RL20*RL20-4080		
SPEC.: VS ECXe 350.619(187326)		
MFR.: SOTEN		

DATA OF LAMP		PHOTOMETRIC DATA Eff: 174.27 lm/W			
MODEL	ET 2835	I _{max} (cd)	7393	S/MH(C0/180)	1.84
NOMINAL POWER(W)	60	LOR(%)	90.5	S/MH(C90/270)	1.71
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	10030	η UP,DN(C0-180)	0.0,45.4
NOMINAL FLUX(lm)	11086	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,45.0
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	0.00
TEST VOLTAGE(V)	230	η down (%)	90.5	CIBSE SHR MAX	0.30

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25℃
Operators:LI
Test Date:2025-10-28

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.485
Humidity:65.0%
Test Distance:8.300m [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	1125	2797	4189	2788	1148	1535	2391	1685	0- 10	152.6	152.6	1.52,1.38
20	1376	6232	5463	6312	1439	4623	5652	5035	10- 20	1020	1172	11.7,10.6
30	1496	5685	3077	5637	1593	6423	3652	6339	20- 30	2146	3318	33.1,29.9
40	1492	3251	1736	3133	1615	4291	1957	3991	30- 40	2493	5811	57.9,52.4
50	1206	1520	902.4	1434	1296	1922	1040	1780	40- 50	2160	7971	79.5,71.9
60	613.1	504.8	469.4	492.8	627.4	615.7	528.6	612.5	50- 60	1246	9217	91.9,83.1
70	254.4	307.2	401.7	306.8	254.0	332.1	503.2	343.9	60- 70	463.2	9680	96.5,87.3
80	128.4	132.8	240.4	130.2	126.9	157.5	280.6	166.2	70- 80	250.9	9931	99,89.6
90	11.65	25.11	50.59	25.96	11.09	31.01	71.98	34.88	80- 90	98.91	10030	100,90.5
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): 6969.4 lm

%lum = 69.5%

%lamp = 62.9%

Conical surface Flux(130deg): 9491.6 lm

%lum = 94.6%

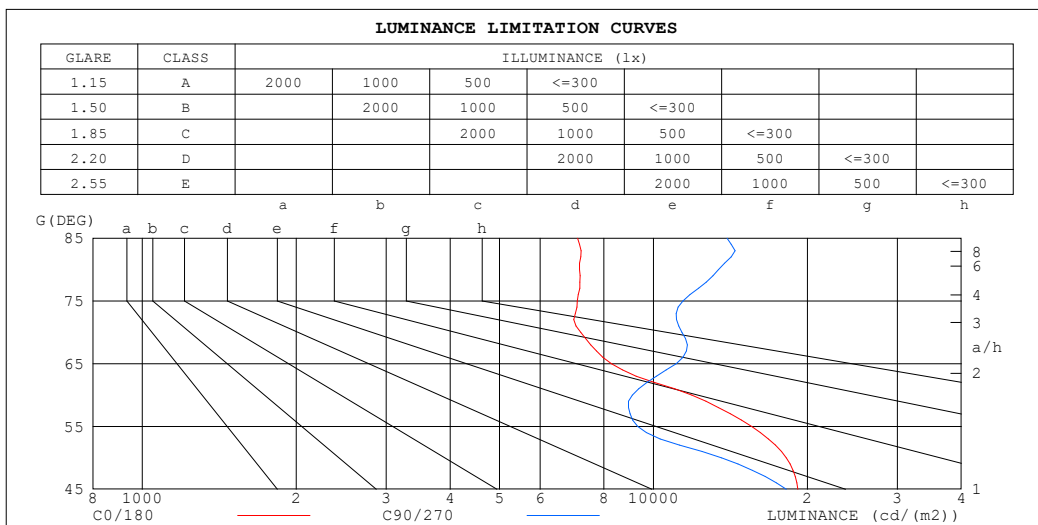
%lamp = 85.6%

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature:25℃
 Operators:LI
 Test Date:2025-10-28

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.485
 Humidity:65.0%
 Test Distance:8.300m [K=1.0000]
 Remarks:

LUMINANCE LIMITATION CURVES

Test:U:229.50V I:0.254A P:57.6W PF:0.986 Freq:49.99Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:11086x1 lm		
NAME: 2853-RL20*RL20*RL20-4080		
SPEC.: VS ECXe 350.619(187326)		
MFR.: SOTEN		



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	7103	13939
80	7168	13402
75	7090	11412
70	7209	11371
65	8276	11069
60	11885	9090
55	15573	9314
50	18179	13592
45	19153	18184

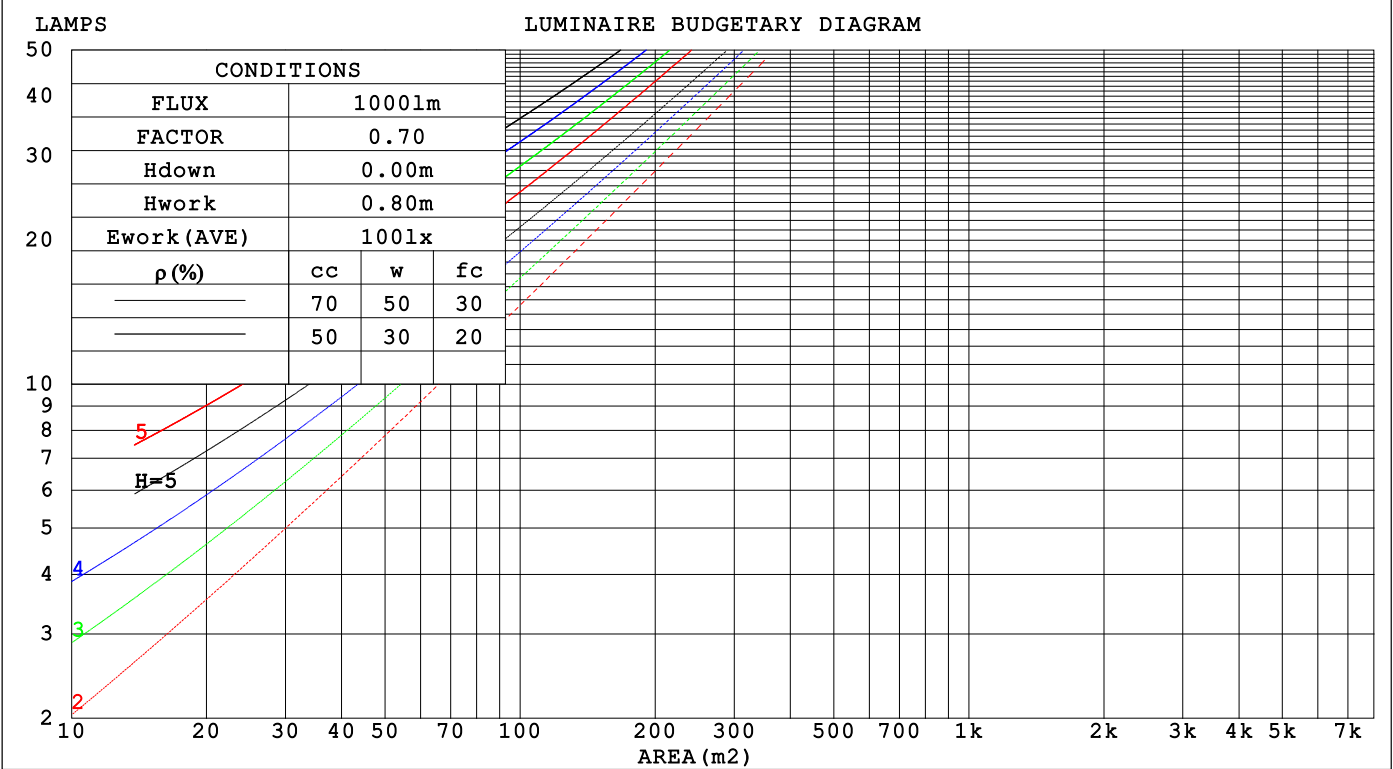
C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25℃
Operators:LI
Test Date:2025-10-28

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.485
Humidity:65.0%
Test Distance:8.300m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:229.50V I:0.254A P:57.6W PF:0.986 Freq:49.99Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:11086x1 lm		
NAME: 2853-RL20*RL20*RL20-4080		
SPEC.: VS ECXe 350.619(187326)		
MFR.: SOTEN		

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															



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25℃
Operators:LI
Test Date:2025-10-28

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.485
Humidity:65.0%
Test Distance:8.300m [K=1.0000]
Remarks:

WEC AND CCEC

Test:U:229.50V I:0.254A P:57.6W PF:0.986 Freq:49.99Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:11086x1 lm		
NAME: 2853-RL20*RL20*RL20-4080		
SPEC.: VS ECXe 350.619(187326)		
MFR.: SOTEN		

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	.232	.132	.042	.226	.129	.041	.214	.123	.039	.203	.117	.038	.193	.112	.036															
2.0	.224	.123	.038	.218	.120	.037	.208	.116	.036	.198	.111	.035	.190	.107	.034															
3.0	.212	.113	.034	.207	.111	.033	.198	.107	.033	.190	.104	.032	.182	.101	.031															
4.0	.200	.104	.031	.196	.102	.030	.188	.100	.030	.180	.097	.029	.173	.094	.029															
5.0	.188	.096	.028	.184	.095	.028	.177	.092	.027	.171	.090	.027	.165	.088	.026															
6.0	.177	.089	.025	.174	.088	.025	.168	.086	.025	.162	.084	.025	.156	.082	.024															
7.0	.167	.083	.023	.164	.082	.023	.159	.080	.023	.153	.079	.023	.148	.077	.023															
8.0	.158	.077	.022	.155	.077	.022	.150	.075	.021	.146	.074	.021	.141	.072	.021															
9.0	.150	.072	.020	.147	.072	.020	.143	.071	.020	.138	.069	.020	.134	.068	.020															
10.0	.142	.068	.019	.140	.067	.019	.136	.066	.019	.132	.065	.019	.128	.064	.018															

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	.172	.172	.172	.147	.147	.147	.101	.101	.101	.058	.058	.058	.018	.018	.018	
1.0	.160	.142	.125	.137	.122	.108	.094	.084	.075	.054	.048	.043	.017	.016	.014	
2.0	.150	.120	.094	.129	.103	.081	.088	.071	.056	.051	.041	.033	.016	.013	.011	
3.0	.143	.103	.072	.122	.089	.062	.084	.062	.044	.048	.036	.026	.016	.012	.008	
4.0	.136	.091	.057	.116	.078	.049	.080	.055	.035	.046	.032	.020	.015	.010	.007	
5.0	.129	.081	.046	.111	.070	.040	.076	.049	.028	.044	.029	.017	.014	.009	.005	
6.0	.123	.073	.038	.106	.064	.033	.073	.045	.023	.042	.026	.014	.014	.009	.005	
7.0	.118	.067	.032	.101	.058	.028	.070	.041	.020	.041	.024	.012	.013	.008	.004	
8.0	.113	.062	.027	.097	.054	.024	.067	.038	.017	.039	.022	.010	.013	.007	.003	
9.0	.108	.058	.024	.093	.050	.021	.064	.035	.015	.037	.021	.009	.012	.007	.003	
10.0	.103	.054	.021	.089	.047	.018	.062	.033	.013	.036	.019	.008	.012	.006	.003	

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature:25℃
 Operators:LI
 Test Date:2025-10-28

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.485
 Humidity:65.0%
 Test Distance:8.300m [K=1.0000]
 Remarks:

UGR(Unified Glare Rating) Table

Test:U:229.50V I:0.254A P:57.6W PF:0.986 Freq:49.99Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:11086x1 lm										
NAME: 2853-RL20*RL20*RL20-4080										
SPEC.: VS ECXe 350.619(187326)										
MFR.: SOTEN										
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	26.2	27.6	26.4	27.7	27.9	19.5	20.9	19.8	21.1	21.3
3H	26.1	27.4	26.4	27.6	27.8	20.2	21.5	20.5	21.7	21.9
4H	26.1	27.3	26.4	27.5	27.8	20.7	21.9	21.0	22.1	22.4
6H	26.1	27.2	26.4	27.4	27.7	21.3	22.4	21.6	22.6	22.9
8H	26.0	27.1	26.4	27.4	27.7	21.6	22.7	21.9	22.9	23.2
12H	26.0	27.1	26.4	27.3	27.6	21.9	22.9	22.2	23.2	23.5
4H 2H	25.9	27.1	26.2	27.4	27.6	20.1	21.3	20.4	21.5	21.8
3H	26.0	27.0	26.3	27.3	27.6	20.9	21.9	21.2	22.2	22.5
4H	26.0	26.9	26.4	27.2	27.6	21.4	22.4	21.8	22.7	23.0
6H	26.0	26.9	26.4	27.2	27.6	22.1	22.9	22.5	23.3	23.6
8H	26.0	26.8	26.4	27.2	27.5	22.5	23.2	22.9	23.6	24.0
12H	26.0	26.7	26.5	27.1	27.5	22.8	23.5	23.2	23.9	24.3
8H 4H	25.9	26.7	26.3	27.1	27.4	21.6	22.3	22.0	22.7	23.1
6H	26.0	26.6	26.5	27.0	27.5	22.3	23.0	22.8	23.4	23.8
8H	26.1	26.6	26.5	27.0	27.5	22.8	23.3	23.3	23.8	24.2
12H	26.1	26.6	26.6	27.0	27.5	23.2	23.7	23.7	24.2	24.6
12H 4H	25.9	26.6	26.3	27.0	27.4	21.6	22.3	22.0	22.6	23.0
6H	26.0	26.6	26.5	27.0	27.4	22.4	22.9	22.8	23.3	23.8
8H	26.1	26.5	26.5	27.0	27.4	22.9	23.3	23.3	23.8	24.2
Variations with the observer position at spacings(CIE Pub.117):										
S = 1.0H	+ 1.4 / - 3.5					+ 0.7 / - 0.9				
1.5H	+ 1.6 / - 5.5					+ 0.7 / - 0.9				
2.0H	+ 3.3 / - 5.2					+ 1.2 / - 0.7				

CIE Pub.117, 11086 lm Total Lamp Luminous Flux Corrected (8log(F/F0) = 8.4)
 Area: 0.1037 m2

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature:25℃
 Operators:LI
 Test Date:2025-10-28

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.485
 Humidity:65.0%
 Test Distance:8.300m [K=1.0000]
 Remarks:

UTILIZATION FACTORS TABLE

Test:U:229.50V I:0.254A P:57.6W PF:0.986 Freq:49.99Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:11086x1 lm		
NAME: 2853-RL20*RL20*RL20-4080		
SPEC.: VS ECXe 350.619(187326)		
MFR.: SOTEN		

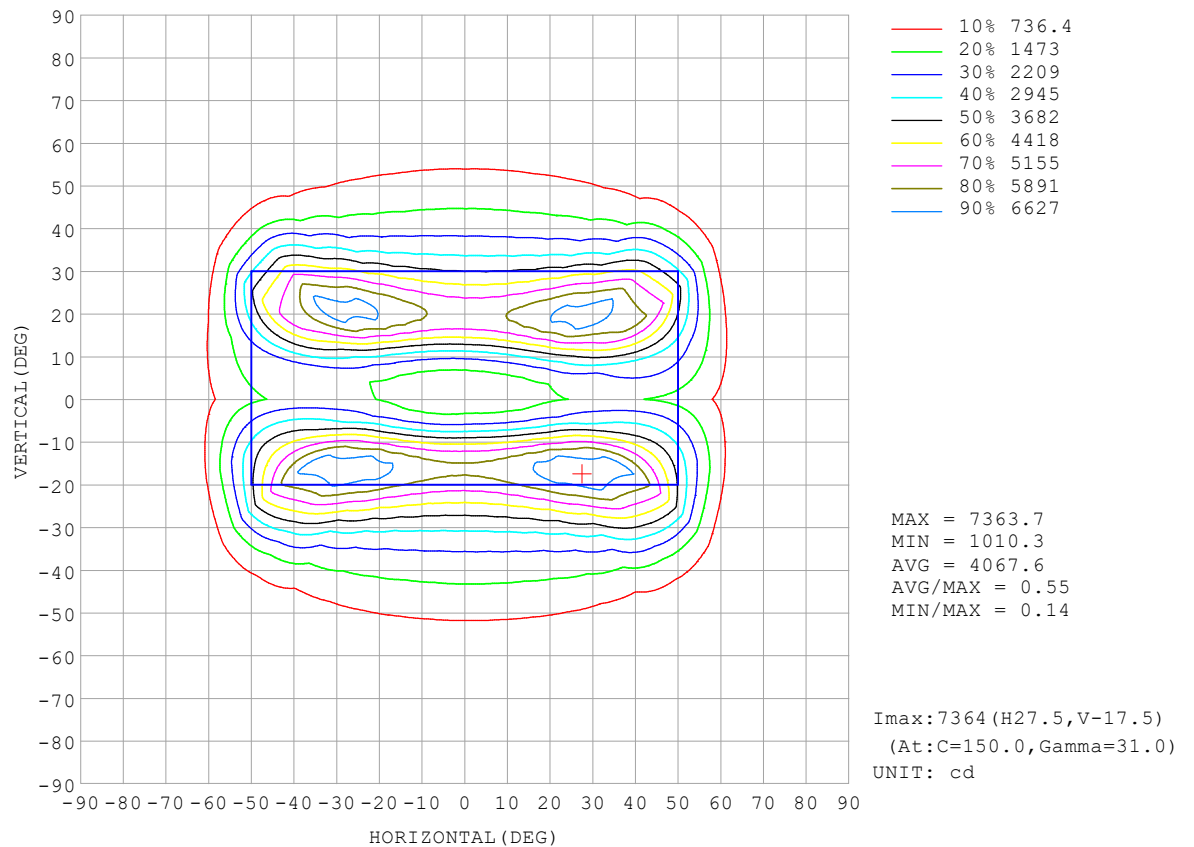
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	59	49	44	58	49	44	57	49	43	38
0.80	68	59	53	67	59	53	66	58	53	47
1.00	76	67	62	75	67	61	73	68	61	55
1.25	82	74	69	80	73	68	78	72	68	62
1.50	86	78	73	84	78	73	82	76	72	66
2.00	91	85	80	89	84	79	86	82	78	72
2.50	93	88	83	92	87	83	89	84	81	74
3.00	96	91	87	94	90	86	91	87	84	77
4.00	99	94	91	97	93	90	93	90	87	80
5.00	100	97	94	98	95	92	94	92	89	82
ROOM INDEX	UF (total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature: 25°C
 Operators: LI
 Test Date: 2025-10-28

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.00.485
 Humidity: 65.0%
 Test Distance: 8.300m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

Test:U:229.50V I:0.254A P:57.6W PF:0.986 Freq:49.99Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:11086x1 lm		
NAME: 2853-RL20*RL20*RL20-4080		
SPEC.: VS ECXe 350.619(187326)		
MFR.: SOTEN		

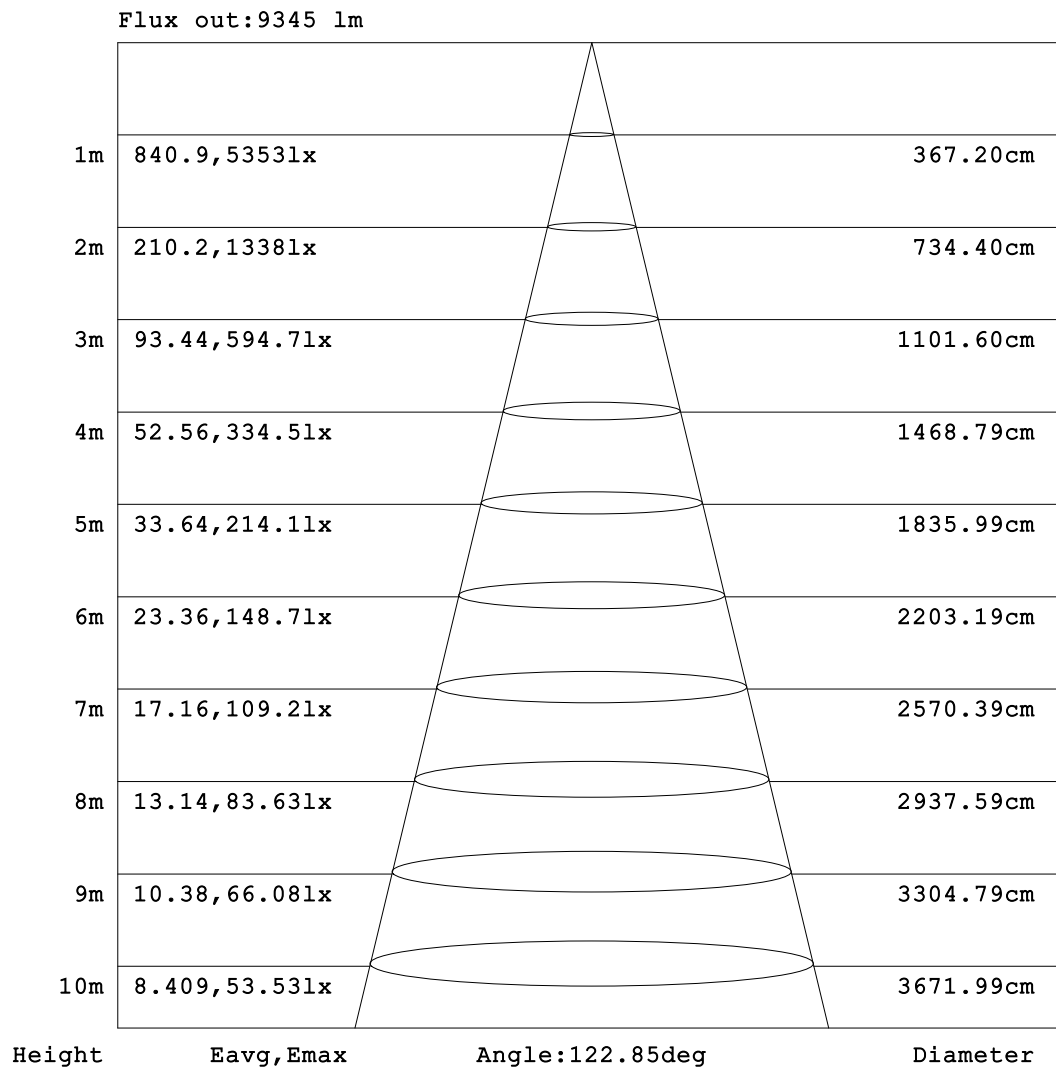


C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature:25℃
 Operators:LI
 Test Date:2025-10-28

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.485
 Humidity:65.0%
 Test Distance:8.300m [K=1.0000]
 Remarks:

AAI Figure

Test:U:229.50V I:0.254A P:57.6W PF:0.986 Freq:49.99Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:11086x1 lm		
NAME: 2853-RL20*RL20*RL20-4080		
SPEC.: VS ECXe 350.619(187326)		
MFR.: SOTEN		



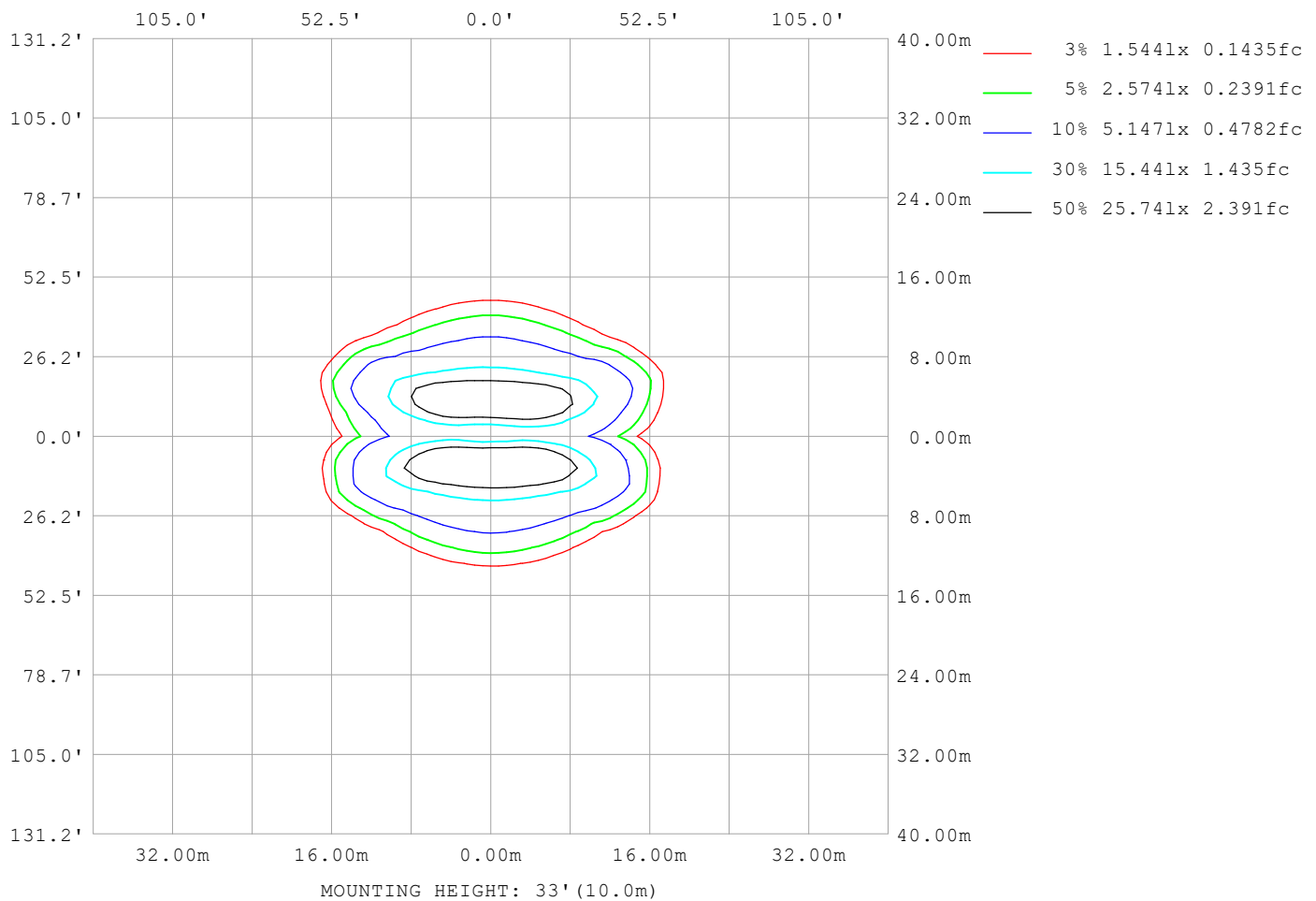
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature:25℃
 Operators:LI
 Test Date:2025-10-28

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.485
 Humidity:65.0%
 Test Distance:8.300m [K=1.0000]
 Remarks:

ISOLUX DIAGRAM

Test:U:229.50V I:0.254A P:57.6W PF:0.986 Freq:49.99Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:11086x1 lm		
NAME: 2853-RL20*RL20*RL20-4080		
SPEC.: VS ECXe 350.619 (187326)		
MFR.: SOTEN		



C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature: 25°C
 Operators: LI
 Test Date: 2025-10-28

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.00.485
 Humidity: 65.0%
 Test Distance: 8.300m [K=1.0000]
 Remarks:

LED Avg.L Report

Test:U:229.50V I:0.254A P:57.6W PF:0.986 Freq:49.99Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:11086x1 lm		
NAME: 2853-RL20*RL20*RL20-4080		
SPEC.: VS ECXe 350.619 (187326)		
MFR.: SOTEN		

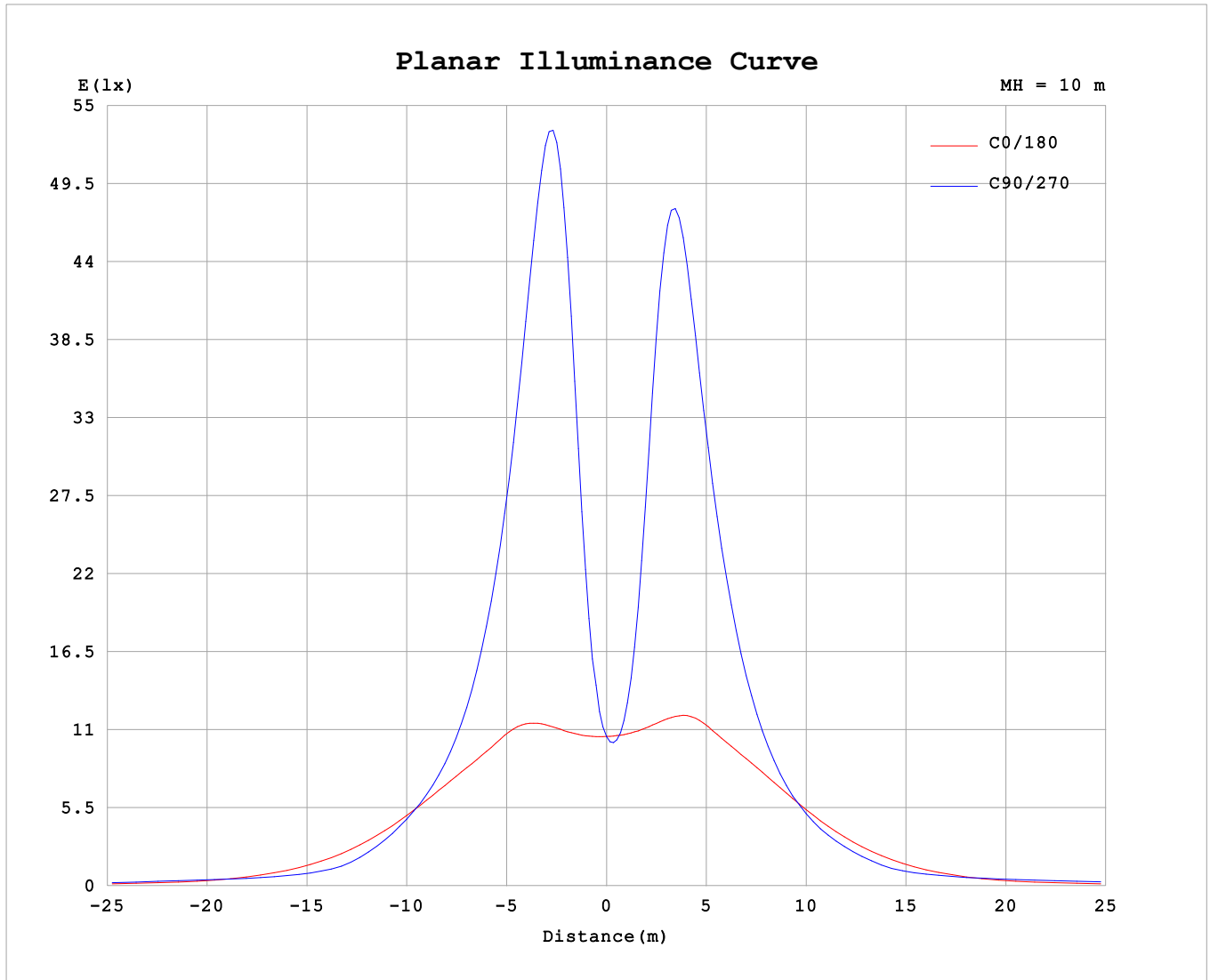
AvgL	cd/m2
L_0~180 (65) av	8235
L_0~180 (75) av	7025
L_0~180 (85) av	6961
L_90~270 (65) av	11647
L_90~270 (75) av	12561
L_90~270 (85) av	16816
L_45 (65) av	9099
L_45 (75) av	8355
L_45 (85) av	8685

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature: 25℃
 Operators: LI
 Test Date: 2025-10-28

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.00.485
 Humidity: 65.0%
 Test Distance: 8.300m [K=1.0000]
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25°C
Operators: LI
Test Date: 2025-10-28

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.00.485
Humidity: 65.0%
Test Distance: 8.300m [K=1.0000]
Remarks:

```

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.485
Humidity:65.0%
Test Distance:8.300m [K=1.0000]
Remarks:

```

```

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.485
Humidity:65.0%
Test Distance:8.300m [K=1.0000]
Remarks:

```