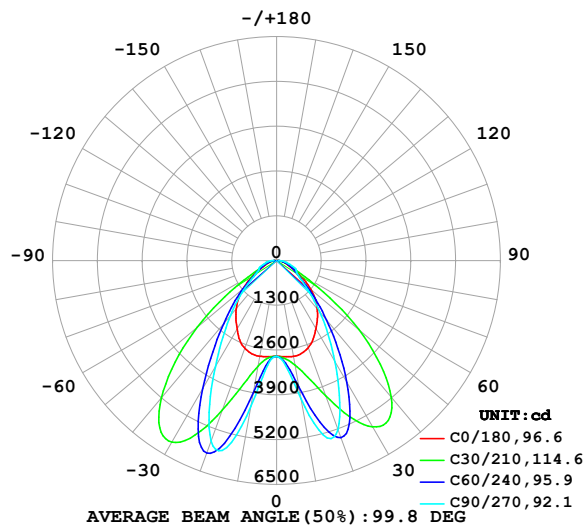


LUMINAIRE PHOTOMETRIC TEST REPORT

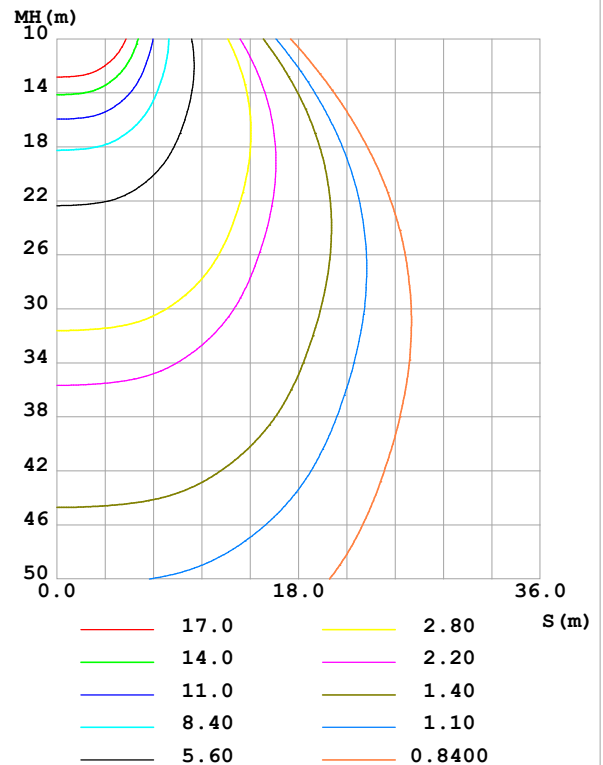
Test:U:229.49V I:0.255A P:57.6W PF:0.986 Freq:50.00Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:11086x1 lm		
NAME: 2853-RL20*60D*RL20-4080		
SPEC.: VS ECXe 350.619(187326)		
MFR.: SOTEN		

DATA OF LAMP		PHOTOMETRIC DATA Eff: 172.46 lm/W			
MODEL	ET 2835	I _{max} (cd)	6183	S/MH (C0/180)	1.22
NOMINAL POWER(W)	60	LOR (%)	89.6	S/MH (C90/270)	1.32
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	9930.6	η UP,DN (C0-180)	0.0,43.4
NOMINAL FLUX(lm)	11086	CIE CLASS	DIRECT	η UP,DN (C180-360)	0.0,46.2
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	0.50
TEST VOLTAGE(V)	230	η down (%)	89.6	CIBSE SHR MAX	0.50

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	2825	3397	4065	3401	2822	3486	4286	3598	0- 10	296.7	296.7	2.99, 2.68
20	2692	5183	5216	5311	2710	5717	5569	5721	10- 20	1218	1514	15.2, 13.7
30	2287	5219	3394	5256	2298	5468	3565	5190	20- 30	2124	3638	36.6, 32.8
40	1843	3259	1959	3158	1832	3321	2095	3103	30- 40	2302	5940	59.8, 53.6
50	1303	1531	1027	1456	1280	1645	1145	1568	40- 50	1902	7842	79, 70.7
60	684.8	666.3	675.2	643.0	671.9	681.7	637.0	678.4	50- 60	1142	8984	90.5, 81
70	327.8	375.4	496.5	371.5	328.3	392.4	491.0	395.9	60- 70	531.8	9516	95.8, 85.8
80	157.8	168.9	274.0	164.2	159.0	182.1	305.2	188.2	70- 80	298.5	9814	98.8, 88.5
90	11.15	28.75	58.77	29.05	11.93	35.85	82.93	38.33	80- 90	116.4	9931	100, 89.6
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): 6968.3 lm

%lum = 70.2%

%lamp = 62.9%

Conical surface Flux(130deg): 9290.8 lm

%lum = 93.6%

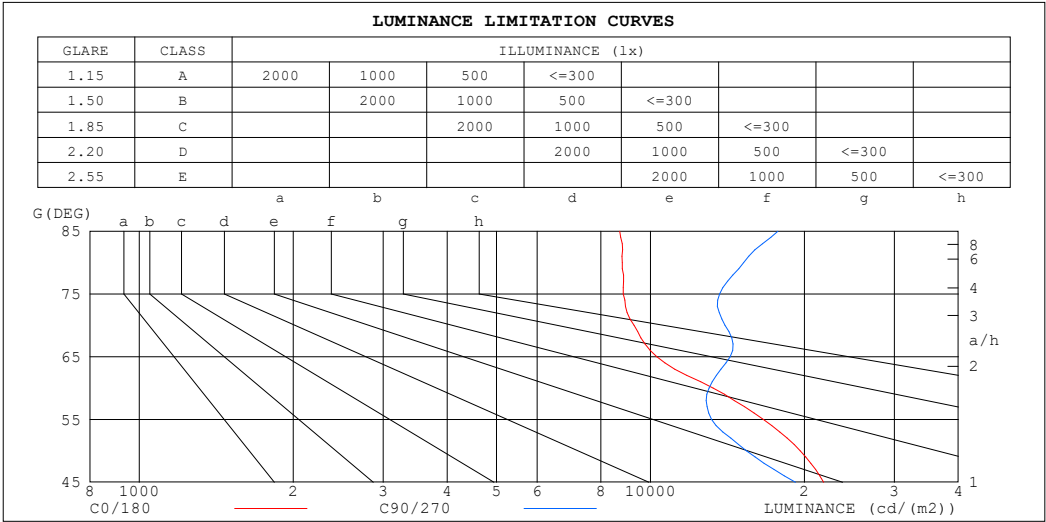
%lamp = 83.8%

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:229.49V I:0.255A P:57.6W PF:0.986 Freq:50.00Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:11086x1 lm		
NAME: 2853-RL20*60D*RL20-4080		
SPEC.: VS ECXe 350.619(187326)		
MFR.: SOTEN		



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	8705	17742
80	8803	15208
75	8851	13644
70	9286	13991
65	10294	14321
60	13270	13015
55	16642	13167
50	19635	15400
45	21809	19224

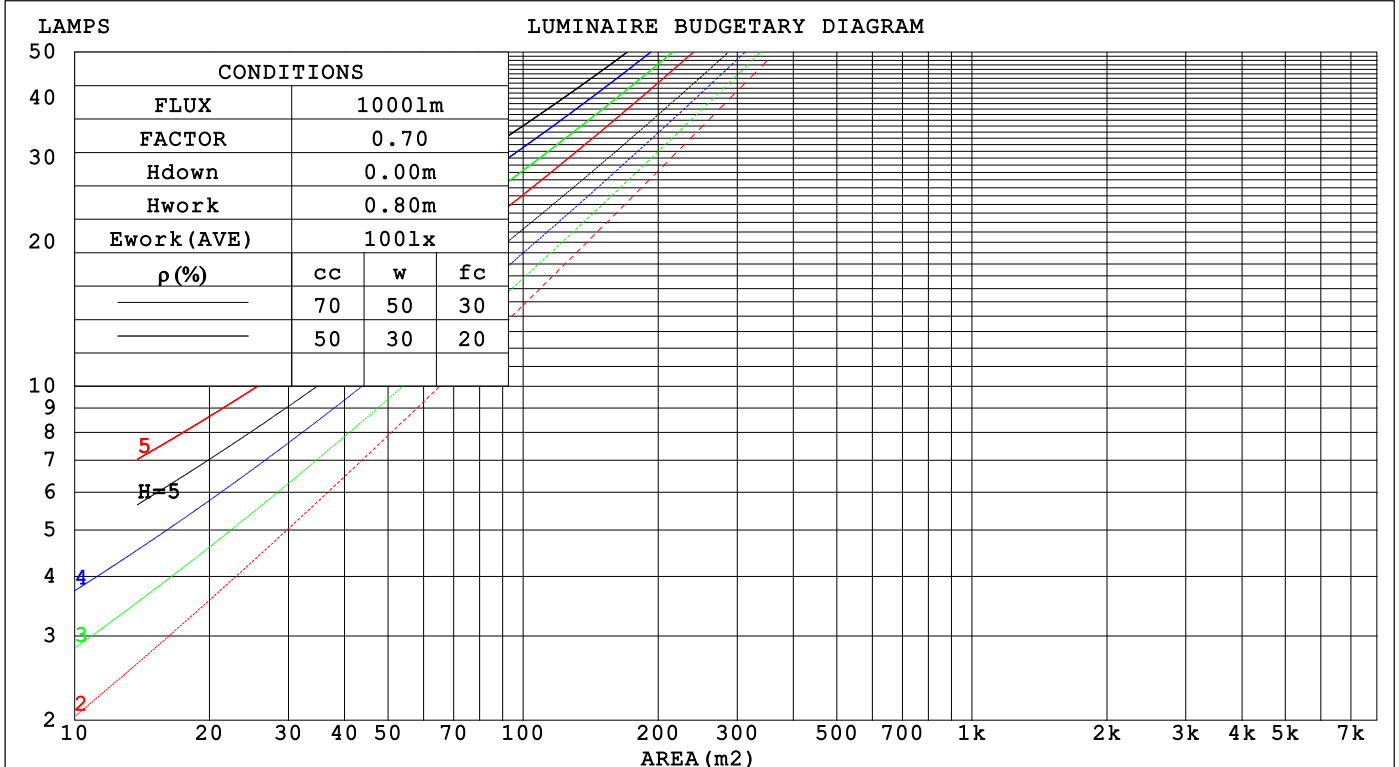
C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25℃
Operators:LI
Test Date:2025-10-28

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:229.49V I:0.255A P:57.6W PF:0.986 Freq:50.00Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:11086x1 lm		
NAME: 2853-RL20*60D*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			Coefficients of Utilization(CU)												
0.0	1.07	1.07	1.07	1.04	1.04	1.04	.00	.00	.00	.95	.95	.95	.91	.91	.91	.90
1.0	.95	.92	.89	.93	.91	.88	.90	.87	.85	.86	.84	.83	.83	.82	.80	.78
2.0	.85	.80	.76	.84	.79	.75	.81	.77	.73	.78	.74	.72	.75	.72	.70	.68
3.0	.76	.70	.65	.75	.69	.64	.72	.67	.63	.70	.66	.62	.68	.64	.61	.60
4.0	.69	.62	.57	.68	.61	.56	.65	.60	.55	.63	.59	.55	.62	.57	.54	.52
5.0	.62	.55	.50	.61	.54	.49	.59	.53	.49	.58	.53	.48	.56	.52	.48	.46
6.0	.56	.49	.44	.56	.49	.44	.54	.48	.43	.53	.47	.43	.51	.47	.43	.41
7.0	.52	.44	.39	.51	.44	.39	.50	.43	.39	.48	.43	.39	.47	.42	.38	.37
8.0	.47	.40	.35	.47	.40	.35	.45	.39	.35	.44	.39	.35	.43	.38	.35	.33
9.0	.43	.37	.32	.43	.36	.32	.42	.36	.32	.41	.36	.32	.40	.35	.31	.30
10.0	.40	.33	.29	.40	.33	.29	.39	.33	.29	.38	.33	.29	.37	.32	.29	.27



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:229.49V I:0.255A P:57.6W PF:0.986 Freq:50.00Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:11086x1 lm		
NAME: 2853-RL20*60D*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	.231	.131	.042	.224	.128	.041	.213	.122	.039	.202	.117	.037	.192	.111	.036															
2.0	.220	.121	.037	.215	.118	.036	.205	.114	.035	.196	.110	.034	.187	.106	.033															
3.0	.208	.111	.033	.203	.109	.033	.194	.105	.032	.186	.102	.031	.178	.099	.031															
4.0	.195	.101	.030	.191	.100	.030	.183	.097	.029	.176	.094	.028	.169	.092	.028															
5.0	.183	.093	.027	.180	.092	.027	.173	.090	.026	.166	.088	.026	.160	.086	.026															
6.0	.172	.086	.025	.169	.085	.025	.163	.083	.024	.157	.082	.024	.152	.080	.024															
7.0	.162	.080	.023	.159	.079	.023	.154	.078	.022	.149	.076	.022	.144	.075	.022															
8.0	.153	.075	.021	.151	.074	.021	.146	.073	.021	.141	.071	.021	.137	.070	.020															
9.0	.145	.070	.020	.143	.069	.020	.138	.068	.019	.134	.067	.019	.130	.066	.019															
10.0	.137	.066	.018	.135	.065	.018	.131	.064	.018	.127	.063	.018	.124	.062	.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	.171	.171	.171	.146	.146	.146	.100	.100	.100	.057	.057	.057	.018	.018	.018	
1.0	.158	.140	.124	.135	.120	.107	.093	.083	.074	.053	.048	.043	.017	.015	.014	
2.0	.149	.118	.093	.127	.102	.080	.087	.070	.056	.050	.041	.033	.016	.013	.011	
3.0	.141	.102	.071	.121	.088	.062	.083	.061	.043	.048	.036	.026	.015	.012	.008	
4.0	.134	.090	.056	.115	.078	.049	.079	.054	.035	.046	.032	.020	.015	.010	.007	
5.0	.127	.080	.046	.109	.069	.040	.075	.048	.028	.044	.028	.017	.014	.009	.005	
6.0	.121	.073	.038	.104	.063	.033	.072	.044	.023	.042	.026	.014	.013	.008	.005	
7.0	.115	.066	.032	.099	.057	.028	.069	.040	.020	.040	.024	.012	.013	.008	.004	
8.0	.110	.061	.027	.095	.053	.024	.066	.037	.017	.038	.022	.010	.012	.007	.003	
9.0	.105	.057	.024	.091	.049	.021	.063	.035	.015	.037	.020	.009	.012	.007	.003	
10.0	.101	.053	.021	.087	.046	.018	.060	.032	.013	.035	.019	.008	.011	.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:229.49V I:0.255A P:57.6W PF:0.986 Freq:50.00Hz										
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:11086x1 lm										
NAME: 2853-RL20*60D*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	24.7	26.0	24.9	26.2	26.4	20.5	21.9	20.8	22.1	22.3
3H	24.8	26.0	25.1	26.2	26.5	21.5	22.8	21.8	23.0	23.2
4H	24.8	26.0	25.1	26.3	26.5	22.1	23.2	22.4	23.5	23.7
6H	24.9	26.0	25.2	26.3	26.5	22.7	23.8	23.0	24.0	24.3
8H	24.9	26.0	25.2	26.2	26.5	23.0	24.0	23.3	24.3	24.6
12H	24.9	25.9	25.3	26.2	26.5	23.2	24.2	23.6	24.5	24.8
4H 2H	24.5	25.7	24.8	26.0	26.2	21.0	22.2	21.3	22.4	22.7
3H	24.8	25.8	25.1	26.1	26.4	22.1	23.2	22.5	23.4	23.7
4H	25.0	25.9	25.3	26.2	26.5	22.8	23.7	23.2	24.0	24.3
6H	25.1	25.9	25.5	26.3	26.6	23.5	24.3	23.9	24.7	25.0
8H	25.2	25.9	25.6	26.3	26.7	23.9	24.6	24.3	25.0	25.3
12H	25.2	25.9	25.6	26.3	26.7	24.2	24.9	24.6	25.3	25.7
8H 4H	25.0	25.7	25.4	26.1	26.5	22.9	23.7	23.3	24.1	24.4
6H	25.2	25.8	25.7	26.2	26.7	23.8	24.4	24.2	24.8	25.2
8H	25.3	25.9	25.8	26.3	26.8	24.2	24.8	24.7	25.2	25.6
12H	25.4	25.9	25.9	26.4	26.8	24.7	25.1	25.2	25.6	26.1
12H 4H	25.0	25.7	25.4	26.0	26.4	22.9	23.6	23.4	24.0	24.4
6H	25.2	25.8	25.7	26.2	26.6	23.8	24.4	24.3	24.8	25.2
8H	25.4	25.8	25.8	26.3	26.8	24.3	24.7	24.8	25.2	25.7
Variations with the observer position at spacings(CIE Pub.117):										
S = 1.0H	+ 1.6 / - 1.8					+ 0.5 / - 0.6				
1.5H	+ 1.4 / - 2.9					+ 0.5 / - 0.5				
2.0H	+ 2.8 / - 3.0					+ 0.7 / - 0.4				

CIE Pub.117, 11086 lm Total Lamp Luminous Flux Corrected ($8\log(F/F_0) = 8.4$)
 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:229.49V I:0.255A P:57.6W PF:0.986 Freq:50.00Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:11086x1 lm		
NAME: 2853-RL20*60D*RL20-4080		
SPEC.: VS ECXe 350.619(187326)		
MFR.: SOTEN		

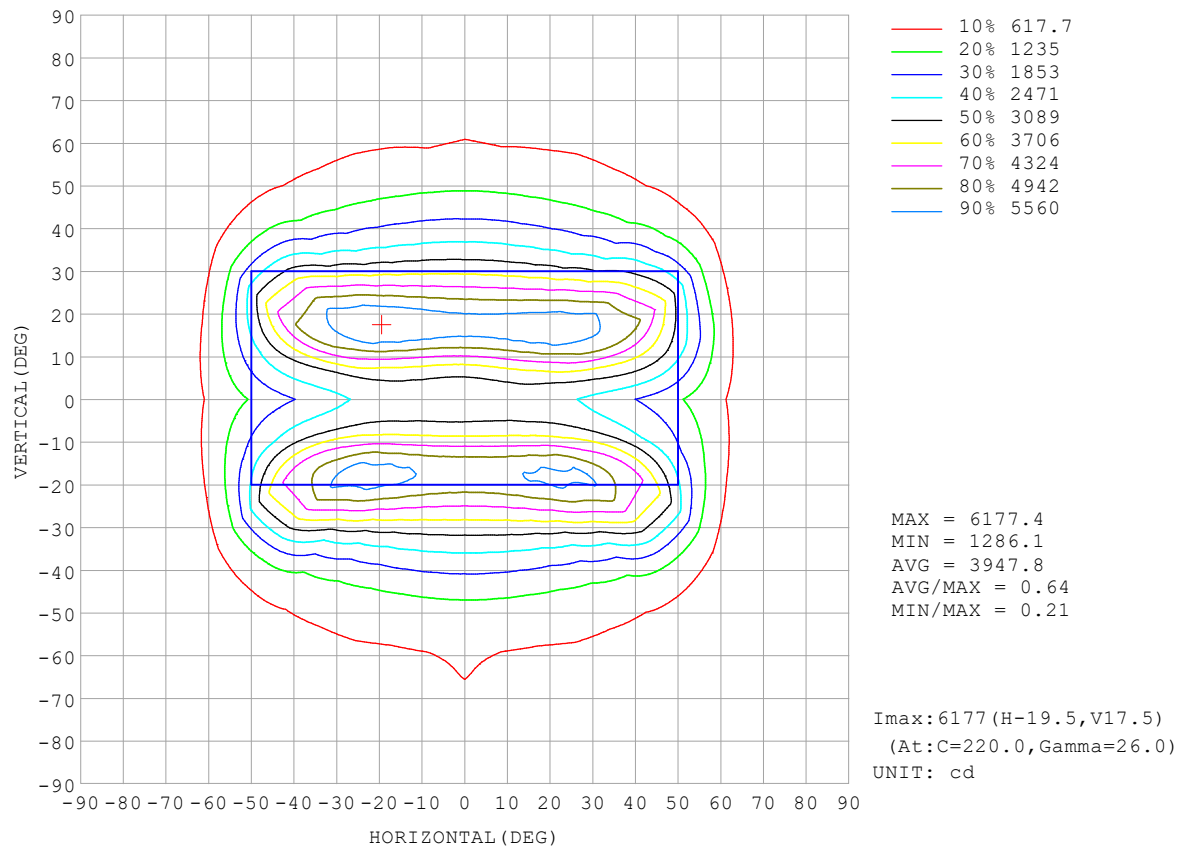
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	59	50	45	59	50	45	58	50	45	40
0.80	68	59	54	67	59	54	66	58	53	48
1.00	75	67	62	74	67	62	73	67	61	56
1.25	81	73	68	80	73	68	78	72	67	62
1.50	85	78	73	84	77	72	81	76	71	66
2.00	90	84	79	88	83	79	86	81	77	71
2.50	93	87	83	91	86	82	88	84	80	74
3.00	95	90	86	93	89	85	90	86	83	76
4.00	98	94	90	96	92	89	92	89	87	79
5.00	99	96	93	97	94	91	93	91	89	81
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:229.49V I:0.255A P:57.6W PF:0.986 Freq:50.00Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:11086x1 lm		
NAME: 2853-RL20*60D*RL20-4080		
SPEC.: VS ECXe 350.619(187326)		
MFR.: SOTEN		

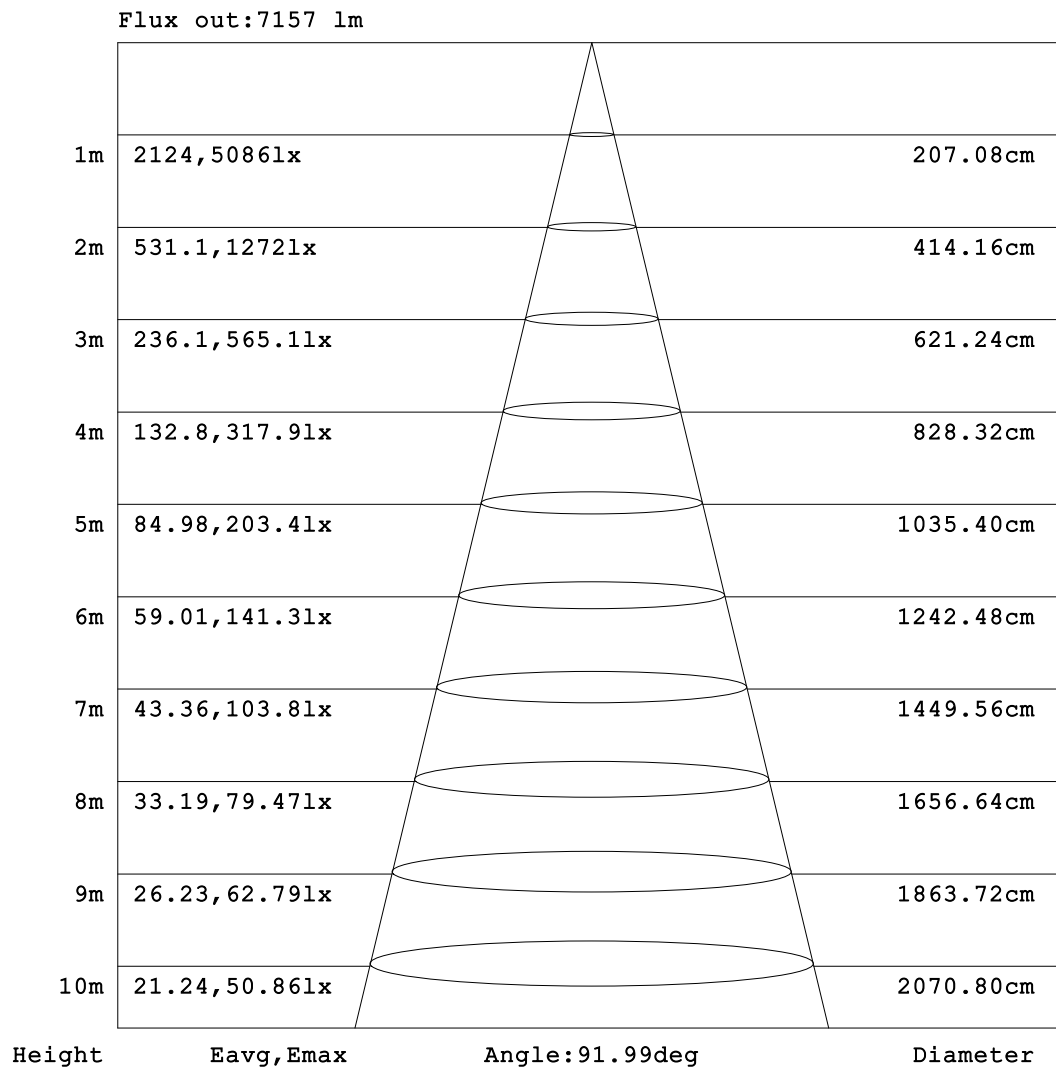


C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature:25℃
 Operators:LI
 Test Date:2025-10-28

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:229.49V I:0.255A P:57.6W PF:0.986 Freq:50.00Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:11086x1 lm		
NAME: 2853-RL20*60D*RL20-4080		
SPEC.: VS ECXe 350.619(187326)		
MFR.: SOTEN		



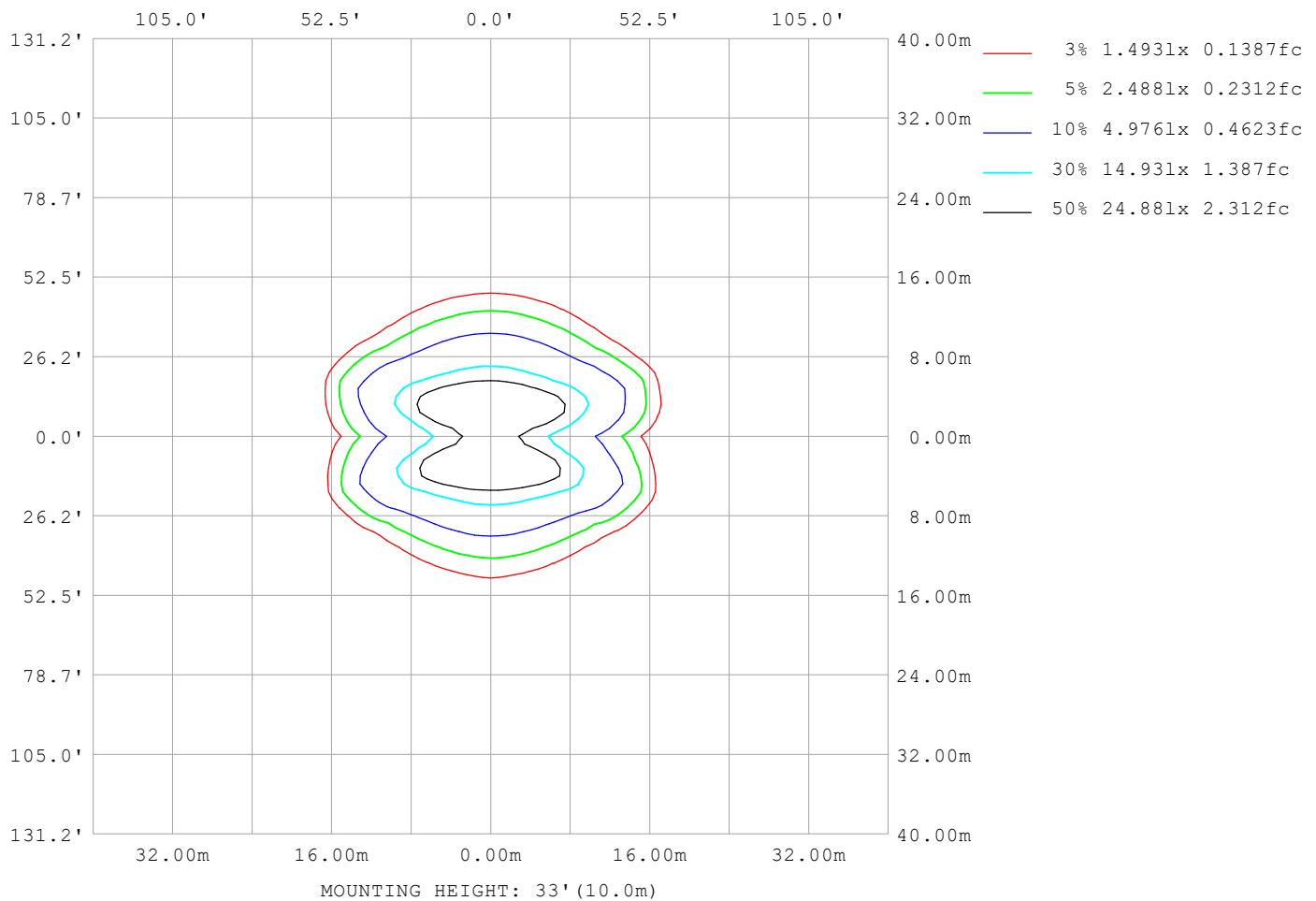
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature: 25°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:

ISOLUX DIAGRAM

Test: U:229.49V I:0.255A P:57.6W PF:0.986 Freq:50.00Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:11086x1 lm		
NAME: 2853-RL20*60D*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:229.49V I:0.255A P:57.6W PF:0.986 Freq:50.00Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:11086x1 lm		
NAME: 2853-RL20*60D*RL20-4080		
SPEC.: VS ECXe 350.619 (187326)		
MFR.: SOTEN		

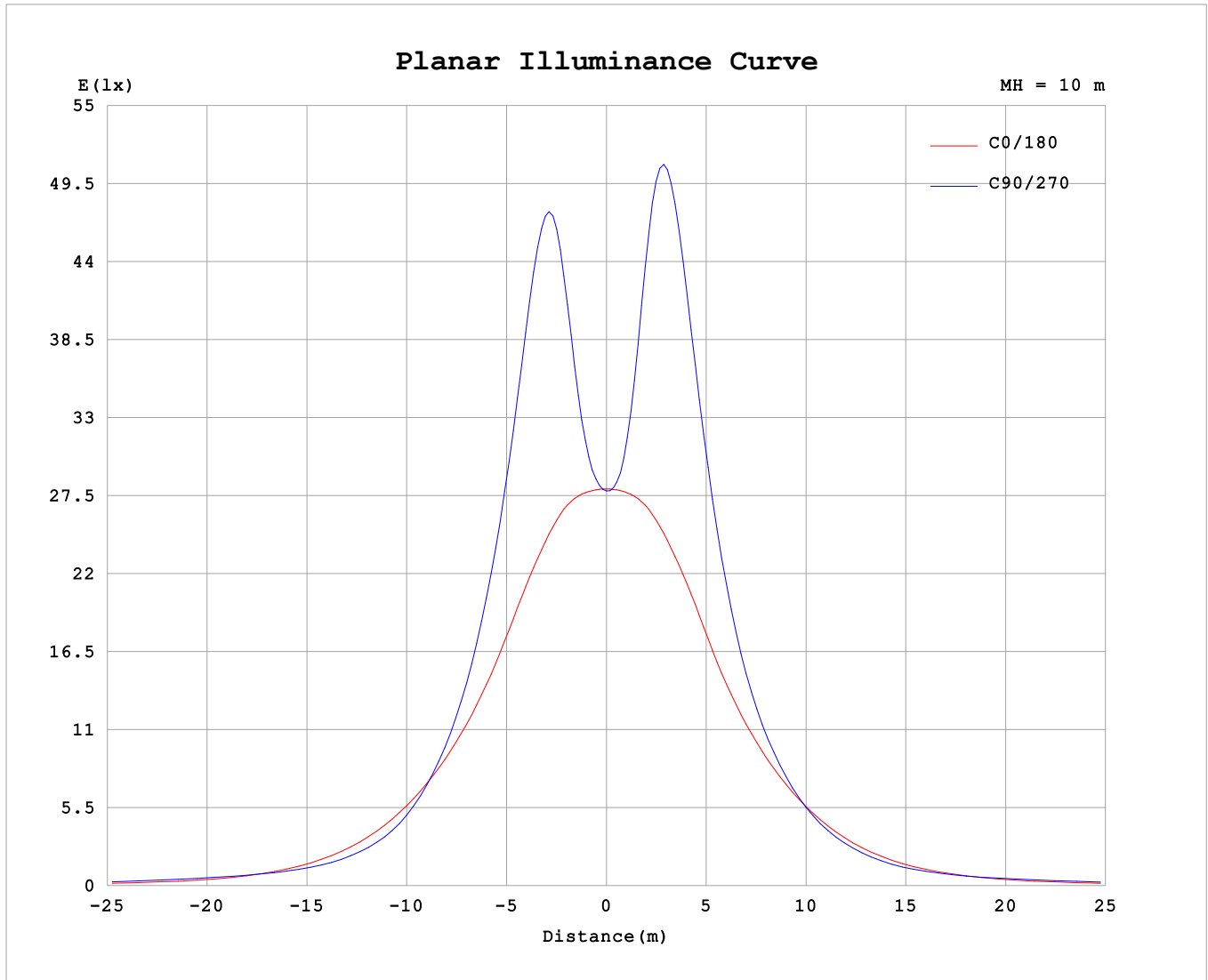
AvgL	cd/m2
L_0~180 (65) av	10204
L_0~180 (75) av	8855
L_0~180 (85) av	8706
L_90~270 (65) av	13608
L_90~270 (75) av	13719
L_90~270 (85) av	20193
L_45 (65) av	11127
L_45 (75) av	10090
L_45 (85) av	10352

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:

```