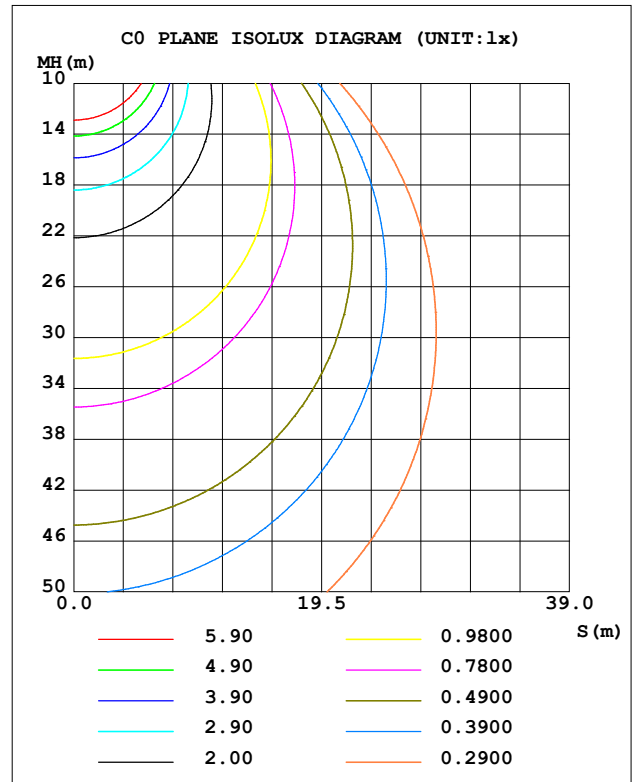
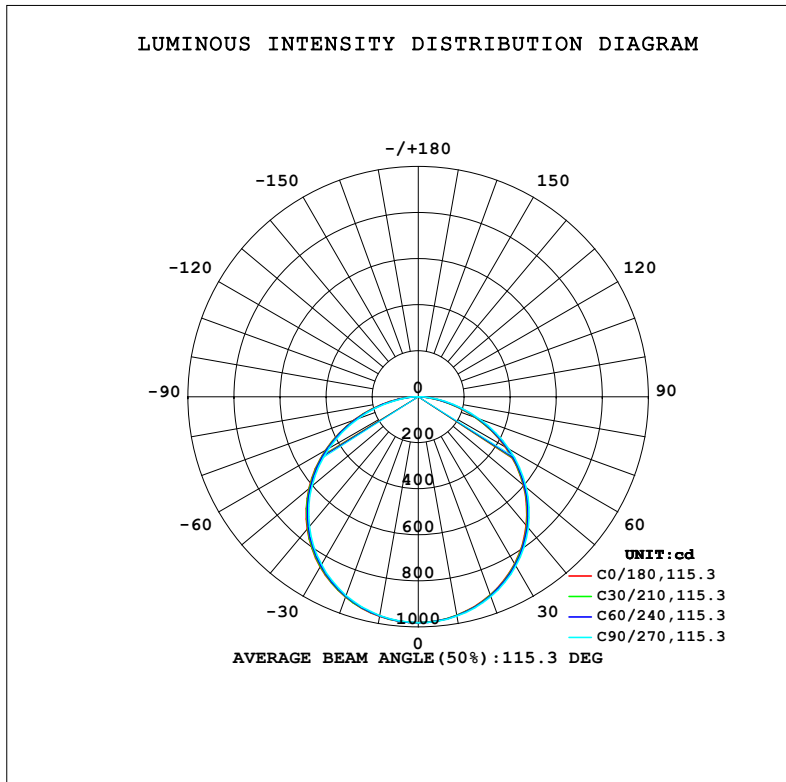


LUMINAIRE PHOTOMETRIC TEST REPORT

NAME: 95SHELLY18LED/WH	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 400 x 60	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: cilinder	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA			
MODEL	95SHELLY18LED/WH	Imax (cd)	981.8	S/MH (C0/180)	1.29
NOMINAL POWER (W)	18	LOR (%)	133.9	S/MH (C90/270)	1.27
RATED VOLTAGE (V)	230	TOTAL FLUX (lm)	2891.5	η UP, DN (C0-180)	0.0, 67.4
NOMINAL FLUX (lm)	2160	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 66.5
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)	230	η down (%)	133.9	CIBSE SHR MAX	1.35



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: MEDIUM
Temperature: 25.3°C
Operators:
Test Date: 19 January 2023

γ Range: 0 - 90DEG
 γ Interval: 2.5DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.00.456
Humidity: 65.0%
Test Distance: 6.340m [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	963.6	965.0	967.3	969.7	968.6	967.2	964.7	962.2	0- 10	92.94	92.94	3.21,4.3
20	915.7	918.5	923.3	928.2	925.8	923.1	918.0	913.2	10- 20	267.4	360.4	12.5,16.7
30	837.5	841.4	848.4	856.1	852.8	849.0	841.5	834.3	20- 30	408.7	769.1	26.6,35.6
40	729.9	734.7	743.8	754.4	750.5	745.6	735.8	725.9	30- 40	498.0	1267	43.8,58.7
50	595.4	600.7	612.2	625.1	620.6	615.1	603.5	590.9	40- 50	522.2	1789	61.9,82.8
60	437.7	443.3	456.8	471.6	466.5	461.1	448.2	433.6	50- 60	475.8	2265	78.3,105
70	265.5	270.7	285.2	301.2	296.1	290.6	277.6	262.0	60- 70	363.8	2629	90.9,122
80	100.4	104.5	117.9	132.1	127.2	122.3	112.1	99.44	70- 80	206.7	2836	98.1,131
90	3.206	2.737	2.462	7.766	5.530	4.508	2.256	2.403	80- 90	55.86	2891	100,134
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): 1529.6 lm

%lum = 52.9%

%lamp = 70.8%

Conical surface Flux(130deg): 2464.6 lm

%lum = 85.2%

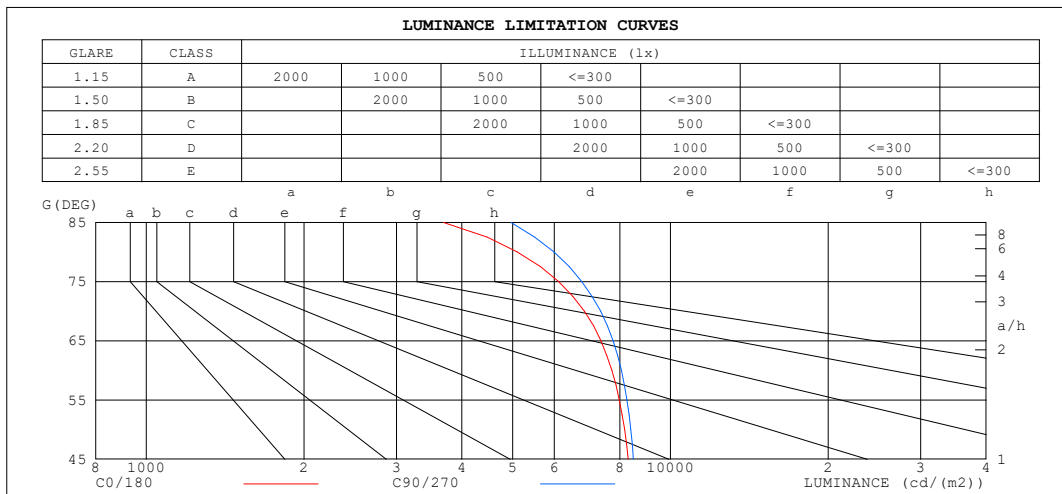
%lamp = 114.1%

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: MEDIUM
Temperature:25.3°C
Operators:
Test Date:19 January 2023

γ Range: 0 - 90DEG
 γ Interval: 2.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.456
Humidity:65.0%
Test Distance:6.340m [K=1.0000]
Remarks:

LUMINANCE LIMITATION CURVES

NAME: 95SHELLY18LED/WH	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 400 x 60	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: cilinder	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	3689	4963
80	5100	5988
75	6119	6770
70	6849	7355
65	7364	7767
60	7724	8057
55	7985	8257
50	8172	8400
45	8308	8497

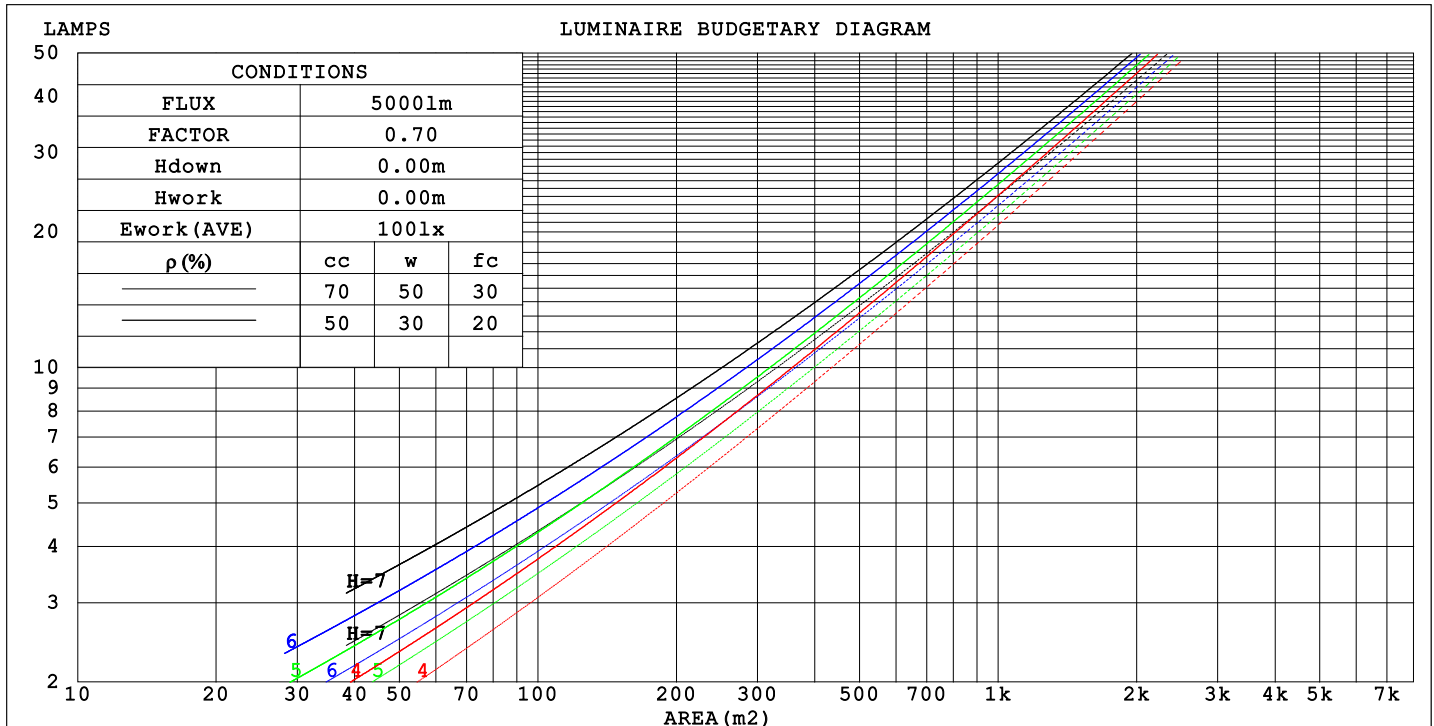
C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: MEDIUM
 Temperature: 25.3°C
 Operators:
 Test Date: 19 January 2023

γ Range: 0 - 90DEG
 γ Interval: 2.5DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.00.456
 Humidity: 65.0%
 Test Distance: 6.340m [K=1.0000]
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

NAME: 95SHELLY18LED/WH	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 400 x 60	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: cilinder	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															



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: MEDIUM
Temperature:25.3°C
Operators:
Test Date:19 January 2023

γ Range: 0 - 90DEG
γ Interval: 2.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.456
Humidity:65.0%
Test Distance:6.340m [K=1.0000]
Remarks:

WEC AND CCEC

NAME: 95SHELLY18LED/WH	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 400 x 60	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: cilinder	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	.418	.238	.075	.409	.233	.074	.391	.224	.072	.375	.216	.069	.359	.208	.067	
2.0	.394	.216	.066	.385	.212	.065	.369	.205	.064	.355	.199	.062	.342	.193	.061	
3.0	.364	.194	.058	.357	.191	.057	.343	.186	.056	.330	.181	.055	.318	.176	.054	
4.0	.336	.175	.051	.329	.172	.051	.317	.168	.050	.306	.164	.049	.295	.160	.049	
5.0	.310	.158	.046	.305	.156	.046	.294	.153	.045	.283	.150	.044	.274	.146	.044	
6.0	.288	.144	.041	.283	.143	.041	.273	.140	.041	.264	.137	.040	.255	.134	.040	
7.0	.268	.132	.038	.263	.131	.037	.254	.129	.037	.246	.126	.037	.239	.124	.036	
8.0	.250	.122	.034	.246	.121	.034	.238	.119	.034	.231	.117	.034	.224	.115	.033	
9.0	.234	.113	.032	.230	.112	.032	.223	.110	.031	.217	.109	.031	.211	.107	.031	
10.0	.220	.106	.029	.217	.105	.029	.210	.103	.029	.204	.102	.029	.199	.100	.029	

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	.255	.255	.255	.218	.218	.218	.149	.149	.149	.085	.085	.085	.027	.027	.027	
1.0	.242	.209	.180	.207	.179	.155	.141	.123	.107	.081	.071	.062	.026	.023	.020	
2.0	.231	.177	.131	.198	.152	.113	.136	.105	.079	.078	.061	.046	.025	.020	.015	
3.0	.221	.153	.099	.189	.132	.086	.130	.092	.060	.075	.054	.036	.024	.017	.012	
4.0	.211	.135	.078	.181	.117	.068	.124	.081	.048	.072	.048	.028	.023	.016	.009	
5.0	.201	.121	.063	.172	.105	.055	.119	.073	.039	.069	.043	.023	.022	.014	.008	
6.0	.191	.110	.052	.164	.095	.045	.113	.067	.032	.066	.039	.019	.021	.013	.006	
7.0	.182	.101	.044	.156	.087	.039	.108	.061	.027	.063	.036	.016	.020	.012	.005	
8.0	.173	.093	.038	.149	.081	.033	.103	.057	.024	.060	.033	.014	.019	.011	.005	
9.0	.165	.087	.034	.142	.075	.029	.098	.053	.021	.057	.031	.012	.019	.010	.004	
10.0	.157	.081	.030	.136	.070	.026	.094	.049	.019	.055	.029	.011	.018	.010	.004	

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: MEDIUM
Temperature:25.3°C
Operators:
Test Date:19 January 2023

γ Range: 0 - 90DEG
γ Interval: 2.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.456
Humidity:65.0%
Test Distance:6.340m [K=1.0000]
Remarks:

UGR(Unified Glare Rating) Table

NAME: 95SHELLY18LED/WH					TYPE:			WEIGHT: 1			
SPEC.:					DIM.: 400 x 60			SERIAL No.: 0			
MFR.: Elmark Industries JSC					SUR.: cilinder			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	17.4	18.9	17.7	19.1	19.3	17.5	19.1	17.8	19.3	19.5
	3H	18.8	20.3	19.1	20.5	20.7	19.1	20.5	19.4	20.7	20.9
	4H	19.4	20.7	19.7	21.0	21.2	19.6	21.0	20.0	21.3	21.5
	6H	19.7	21.0	20.1	21.3	21.5	20.1	21.3	20.4	21.6	21.9
	8H	19.8	21.0	20.1	21.3	21.6	20.2	21.4	20.5	21.7	22.0
	12H	19.8	21.0	20.2	21.3	21.6	20.2	21.4	20.6	21.7	22.0
4H	2H	18.0	19.4	18.3	19.6	19.9	18.1	19.5	18.4	19.7	20.0
	3H	19.6	20.8	20.0	21.1	21.4	19.8	21.0	20.2	21.3	21.6
	4H	20.3	21.4	20.7	21.7	22.0	20.5	21.6	20.9	21.9	22.3
	6H	20.7	21.7	21.1	22.0	22.4	21.0	22.0	21.4	22.3	22.7
	8H	20.9	21.7	21.3	22.1	22.5	21.2	22.1	21.6	22.5	22.9
	12H	20.9	21.7	21.3	22.1	22.5	21.3	22.1	21.7	22.5	22.9
8H	4H	20.5	21.4	20.9	21.8	22.2	20.7	21.6	21.2	22.0	22.4
	6H	21.1	21.8	21.5	22.2	22.7	21.4	22.1	21.8	22.5	23.0
	8H	21.3	21.9	21.7	22.4	22.8	21.6	22.3	22.1	22.7	23.2
	12H	21.4	22.0	21.9	22.4	22.9	21.8	22.4	22.3	22.8	23.3
12H	4H	20.5	21.4	21.0	21.7	22.1	20.7	21.6	21.2	21.9	22.3
	6H	21.1	21.8	21.6	22.2	22.7	21.4	22.1	21.9	22.5	23.0
	8H	21.4	21.9	21.8	22.4	22.9	21.7	22.3	22.2	22.7	23.2
Variations with the observer position at spacings(CIE Pub.117):											
S = 1.0H		+ 0.2 / - 0.2					+ 0.1 / - 0.2				
1.5H		+ 0.2 / - 0.3					+ 0.2 / - 0.3				
2.0H		+ 0.2 / - 0.3					+ 0.2 / - 0.3				

CIE Pub.117, 2160 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 2.7)
Area: 0.113354 m2

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: MEDIUM
Temperature:25.3°C
Operators:
Test Date:19 January 2023

γ Range: 0 - 90DEG
γ Interval: 2.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.456
Humidity:65.0%
Test Distance:6.340m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

NAME: 95SHELLY18LED/WH	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 400 x 60	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: cilinder	Shielding Angle:

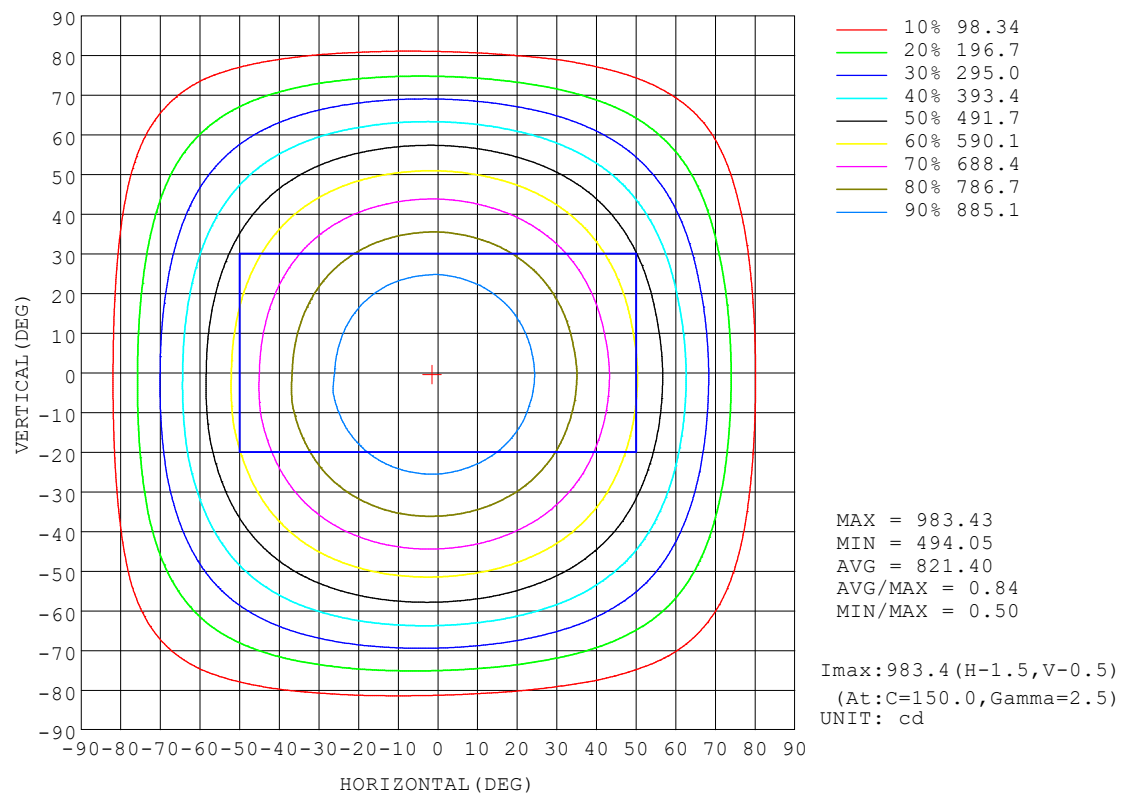
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	76	61	51	75	60	51	74	60	51	42
0.80	90	74	64	88	74	64	86	72	63	54
1.00	101	86	76	100	85	76	97	87	75	66
1.25	111	97	87	109	96	86	105	94	85	75
1.50	117	104	95	115	103	94	111	101	93	82
2.00	127	115	106	124	114	105	120	111	103	93
2.50	132	122	113	129	120	112	124	116	110	99
3.00	137	127	120	134	125	118	128	121	116	104
4.00	142	134	128	139	132	126	133	127	123	111
5.00	145	139	133	142	136	131	136	131	127	115
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: MEDIUM
Temperature:25.3°C
Operators:
Test Date:19 January 2023

γ Range: 0 - 90DEG
γ Interval: 2.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.456
Humidity:65.0%
Test Distance:6.340m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

NAME: 95SHELLY18LED/WH	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 400 x 60	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: cilinder	Shielding Angle:

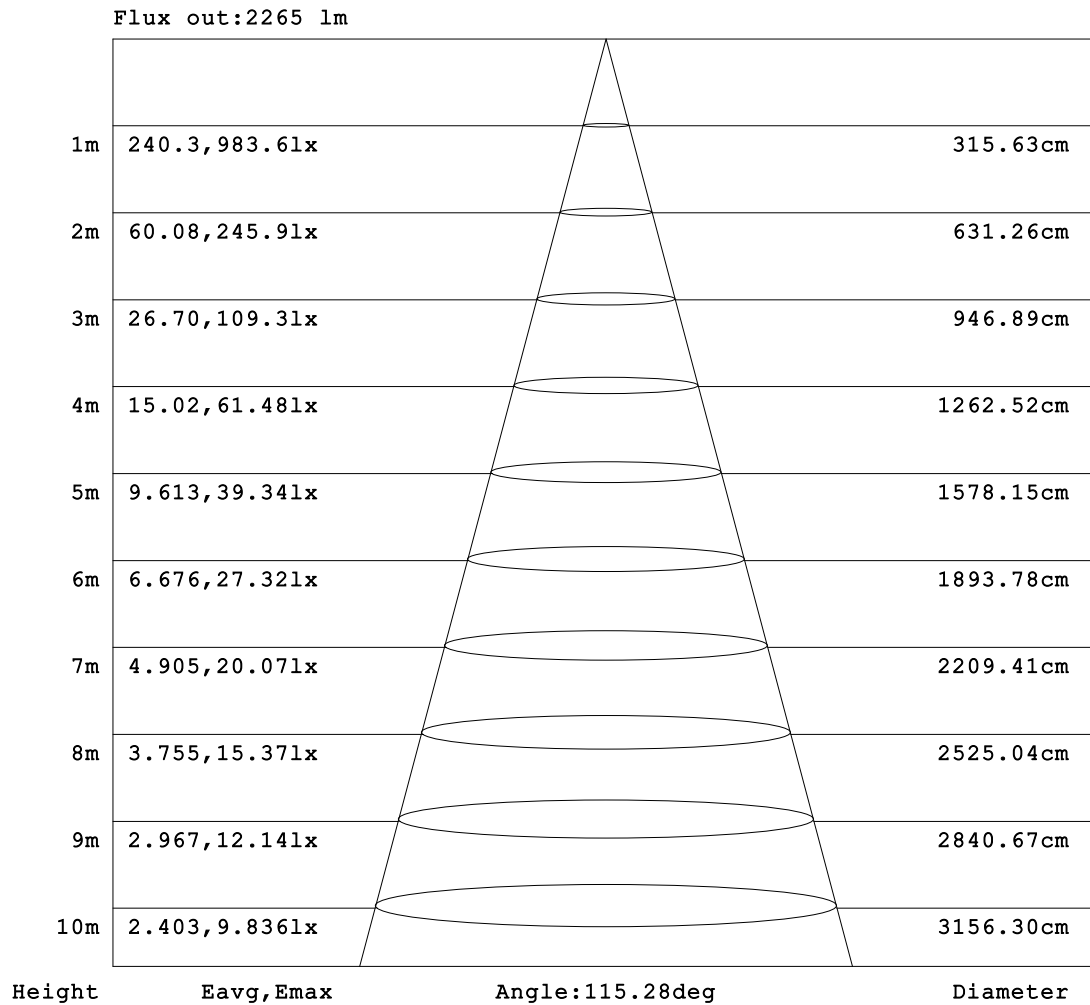


C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: MEDIUM
Temperature:25.3°C
Operators:
Test Date:19 January 2023

γ Range: 0 - 90DEG
γ Interval: 2.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.456
Humidity:65.0%
Test Distance:6.340m [K=1.0000]
Remarks:

AAI Figure

NAME: 95SHELLY18LED/WH	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 400 x 60	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: cilinder	Shielding Angle:



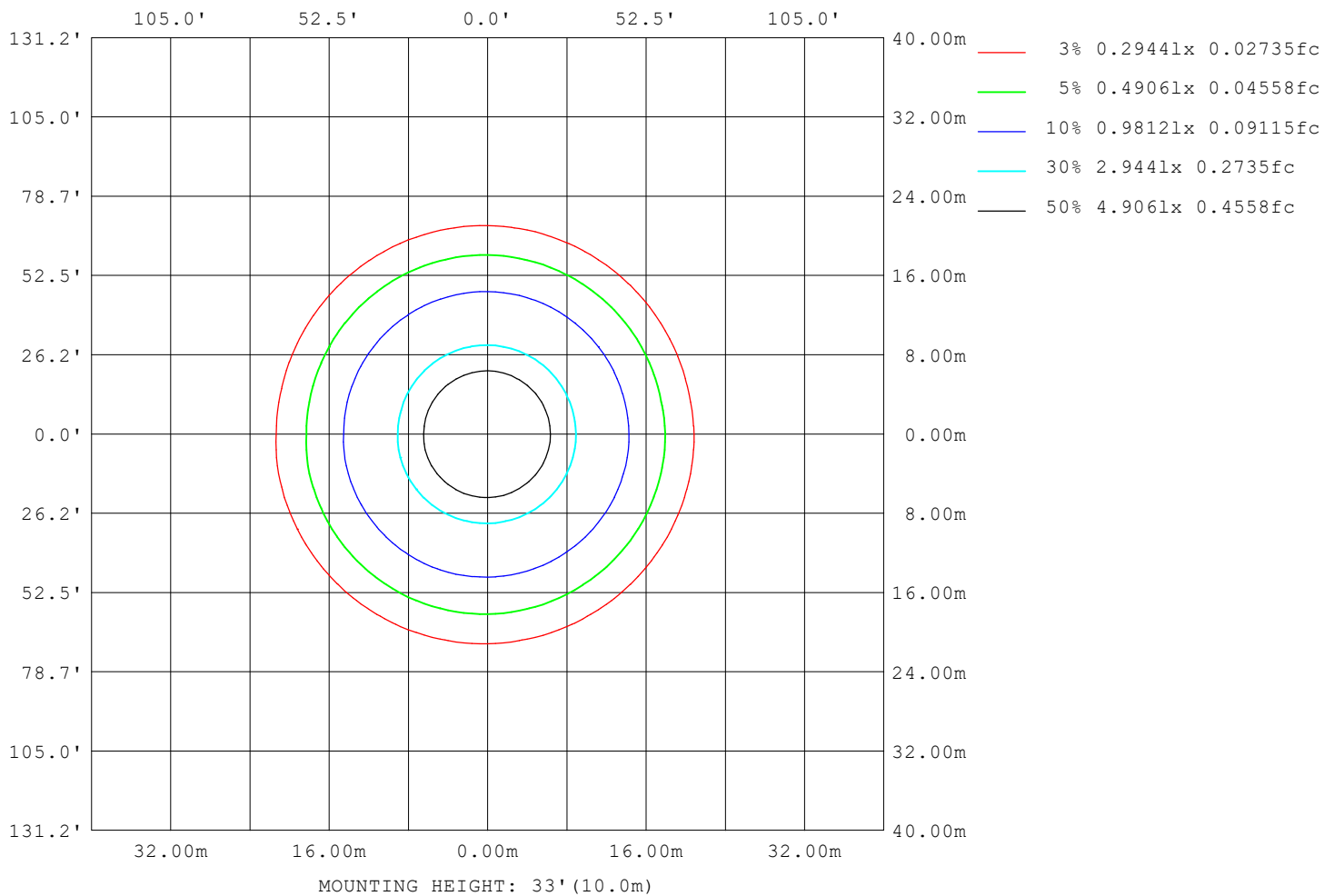
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: MEDIUM
 Temperature: 25.3°C
 Operators:
 Test Date: 19 January 2023

γ Range: 0 - 90DEG
 γ Interval: 2.5DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.00.456
 Humidity: 65.0%
 Test Distance: 6.340m [K=1.0000]
 Remarks:

ISOLUX DIAGRAM

NAME: 95SHELLY18LED/WH	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 400 x 60	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: cilinder	Shielding Angle:



C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: MEDIUM
 Temperature: 25.3°C
 Operators:
 Test Date: 19 January 2023

γ Range: 0 - 90DEG
 γ Interval: 2.5DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.00.456
 Humidity: 65.0%
 Test Distance: 6.340m [K=1.0000]
 Remarks:

LED Avg.L Report

NAME: 95SHELLY18LED/WH	TYPE:	WEIGHT: 1
SPEC.:	DIM.: 400 x 60	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: cilinder	Shielding Angle:

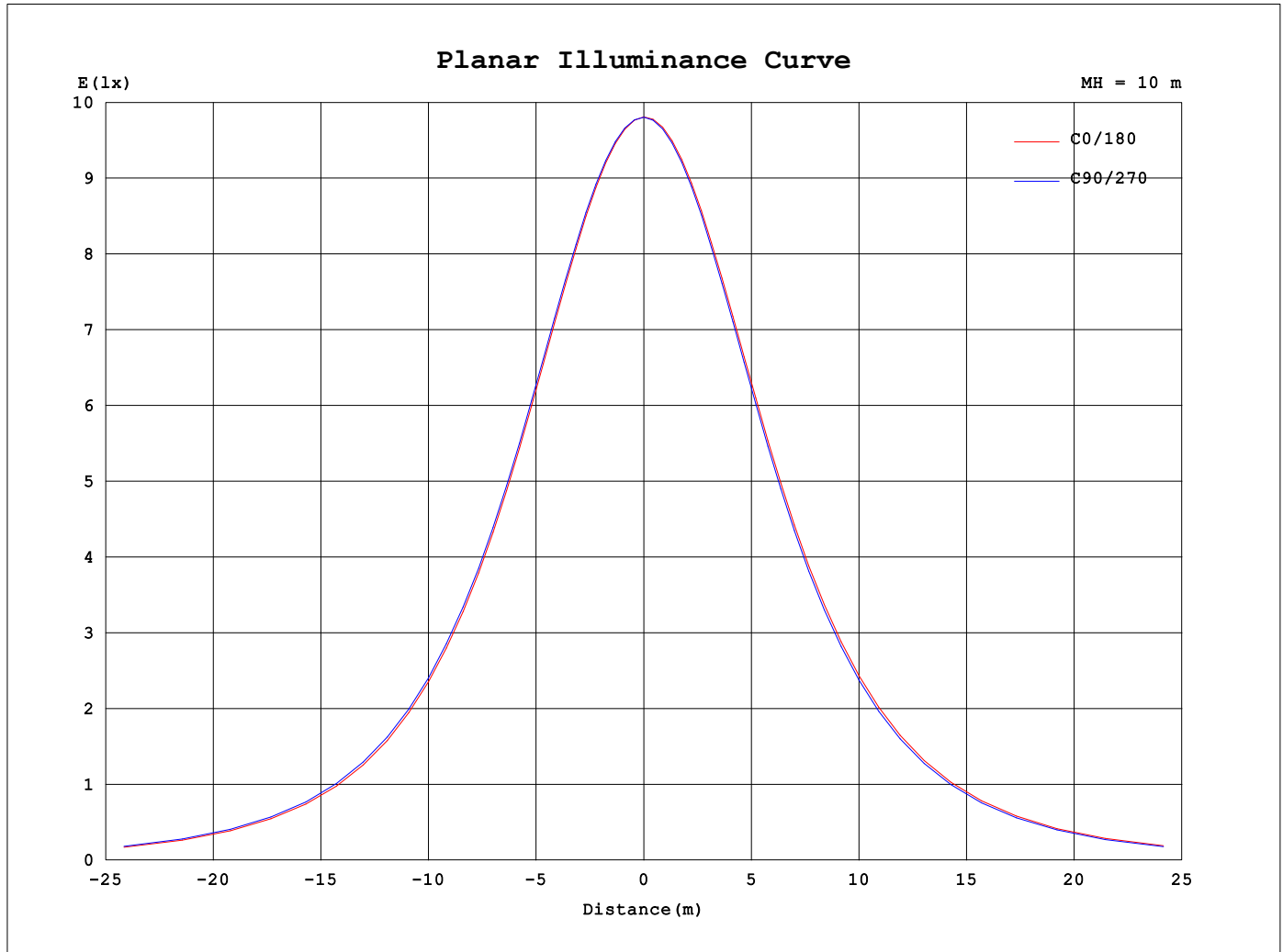
AvgL	cd/m2
L_0~180 (65) av	7676
L_0~180 (75) av	6625
L_0~180 (85) av	4715
L_90~270 (65) av	7685
L_90~270 (75) av	6657
L_90~270 (85) av	4798
L_45 (65) av	7682
L_45 (75) av	6644
L_45 (85) av	4771

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: MEDIUM
Temperature:25.3°C
Operators:
Test Date:19 January 2023

γ Range: 0 - 90DEG
γ Interval: 2.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.456
Humidity:65.0%
Test Distance:6.340m [K=1.0000]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: MEDIUM
Temperature: 25.3°C
Operators:
Test Date: 19 January 2023

γ Range: 0 - 90DEG
 γ Interval: 2.5DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.00.456
Humidity: 65.0%
Test Distance: 6.340m [K=1.0000]
Remarks:

```

γ Range: 0 - 90DEG
γ Interval: 2.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.456
Humidity:65.0%
Test Distance:6.340m [K=1.0000]
Remarks:

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γ Range: 0 - 90DEG
γ Interval: 2.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.456
Humidity:65.0%
Test Distance:6.340m [K=1.0000]
Remarks:

```