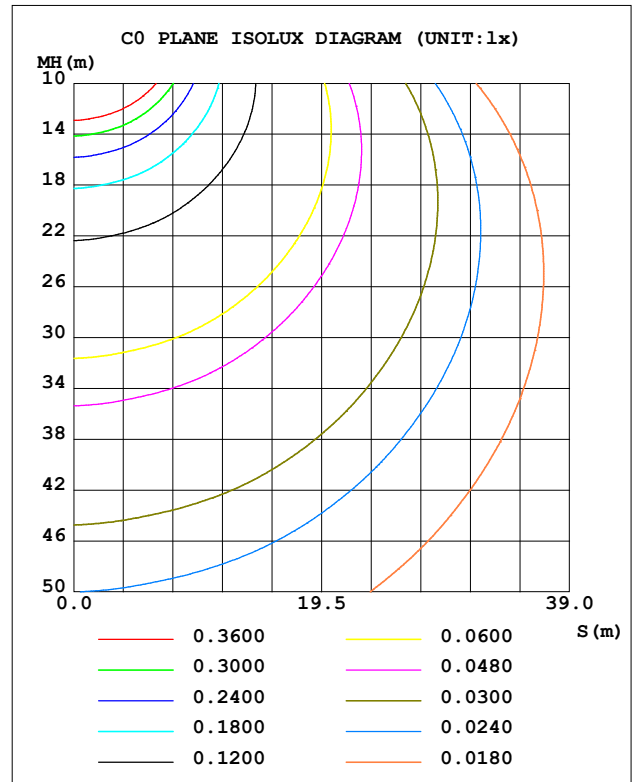
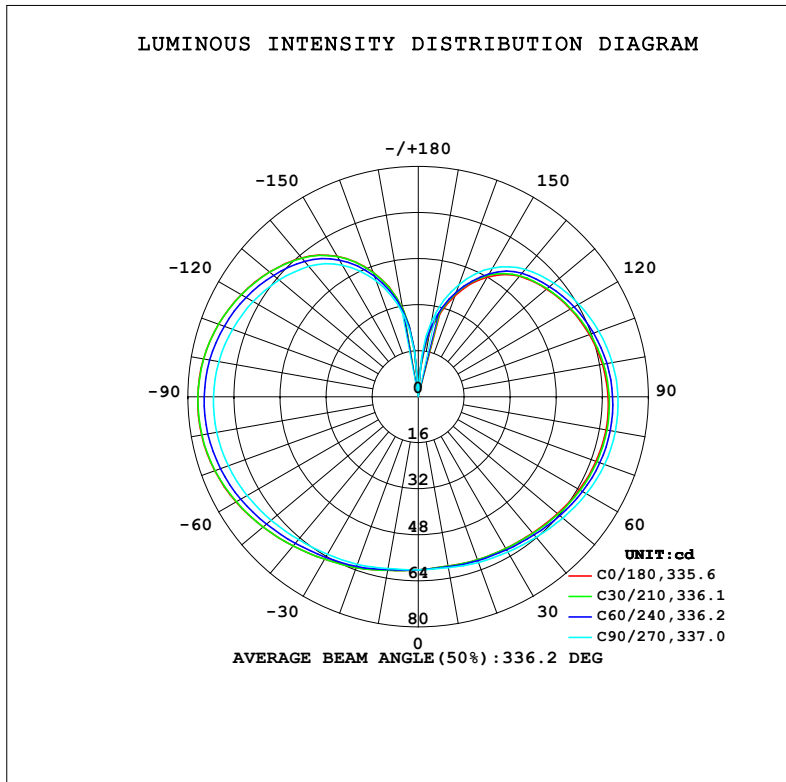


LUMINAIRE PHOTOMETRIC TEST REPORT

NAME: 99LED838WW	TYPE:	WEIGHT: 1
SPEC.:	DIM.: F90	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: round	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA			
MODEL	99LED838WW	I _{max} (cd)	76.90	S/MH (C0/180)	1.70
NOMINAL POWER (W)	7.2	LOR (%)	101.0	S/MH (C90/270)	1.64
RATED VOLTAGE (V)	230	TOTAL FLUX (lm)	813.76	η UP, DN (C0-180)	23.9, 26.0
NOMINAL FLUX (lm)	806	CIE CLASS	DIFFUSE	η UP, DN (C180-360)	24.5, 26.5
LAMPS INSIDE	1	η up (%)	48.4	CIBSE SHR NOM	2.00
TEST VOLTAGE (V)	230	η down (%)	52.6	CIBSE SHR MAX	2.00



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.3°C
Operators:
Test Date: 21 October 2022

γ Range: 0 - 180DEG
γ Interval: 2.5DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.00.456
Humidity: 65.0%
Test Distance: 6.265m [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	59.75	59.84	60.28	60.82	61.20	61.12	60.63	60.05	0- 10	5.753	5.753	0.71,0.71
20	60.28	60.41	61.25	62.41	63.17	63.05	61.97	60.78	10- 20	17.33	23.08	2.84,2.86
30	60.86	61.12	62.29	63.96	65.16	64.85	63.19	61.50	20- 30	28.82	51.90	6.38,6.44
40	61.81	62.27	63.73	65.96	67.63	67.14	64.81	62.57	30- 40	40.00	91.90	11.3,11.4
50	63.22	63.83	65.60	68.28	70.41	69.73	66.76	64.02	40- 50	50.72	142.6	17.5,17.7
60	64.63	65.36	67.46	70.58	73.11	72.26	68.69	65.47	50- 60	60.55	203.2	25,25.2
70	65.74	66.54	68.89	72.32	75.28	74.30	70.23	66.59	60- 70	68.76	271.9	33.4,33.7
80	66.25	67.08	69.55	73.29	76.48	75.50	71.09	67.18	70- 80	74.53	346.5	42.6,43
90	65.98	66.83	69.39	73.26	76.61	75.67	71.13	67.08	80- 90	77.28	423.7	52.1,52.6
100	65.00	65.90	68.48	72.37	75.77	74.85	70.37	66.31	90-100	76.79	500.5	61.5,62.1
110	63.27	64.19	66.76	70.56	73.85	72.96	68.67	64.71	100-110	73.06	573.6	70.5,71.2
120	61.03	61.82	64.41	68.05	71.03	70.20	66.24	62.54	110-120	66.45	640.0	78.7,79.4
130	58.23	58.93	61.51	64.85	67.48	66.69	63.15	59.73	120-130	57.60	697.6	85.7,86.6
140	54.68	55.41	57.82	60.88	63.05	62.31	59.20	56.15	130-140	47.05	744.7	91.5,92.4
150	48.04	49.00	51.70	54.76	56.38	55.69	52.83	50.02	140-150	35.12	779.8	95.8,96.7
160	37.48	38.59	41.46	44.41	46.07	45.40	42.97	40.22	150-160	22.11	801.9	98.5,99.5
170	22.66	23.33	26.23	29.57	31.04	30.60	28.59	25.26	160-170	10.14	812.1	99.8,101
180	0.7766	0.7847	0.7891	0.7937	0.7766	0.7875	0.7973	0.7937	170-180	1.707	813.8	100,101
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 115.96 lm

%lum = 14.2%

%lamp = 14.4%

Conical surface Flux(130deg): 236.66 lm

%lum = 29.1%

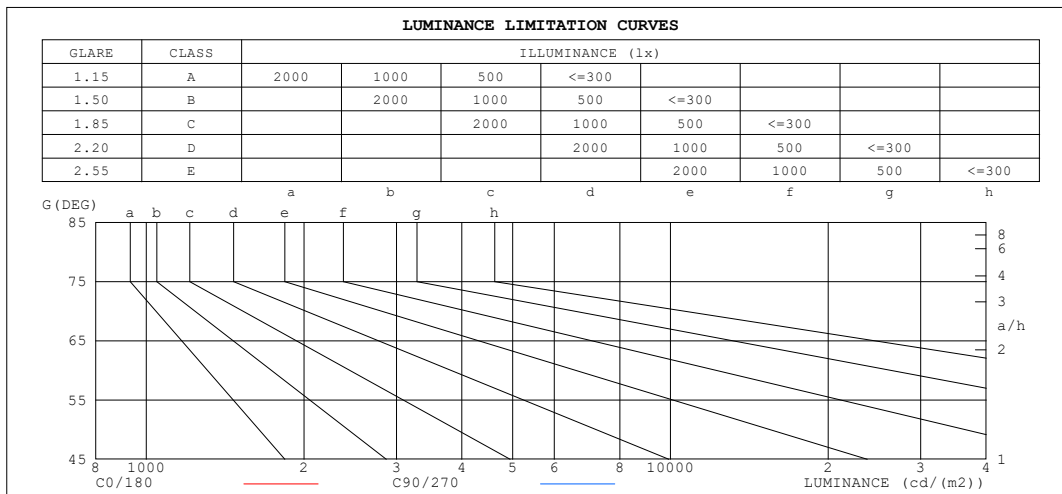
%lamp = 29.4%

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:
Test Date:21 October 2022

γ Range: 0 - 180DEG
 γ Interval: 2.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.456
Humidity:65.0%
Test Distance:6.265m [K=1.0000]
Remarks:

LUMINANCE LIMITATION CURVES

NAME: 99LED838WW	TYPE:	WEIGHT: 1
SPEC.:	DIM.: F90	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: round	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	759161	798636
80	381154	400673
75	255042	267917
70	192017	201494
65	154258	161559
60	129138	134959
55	111374	116095
50	98254	102084
45	88285	91449

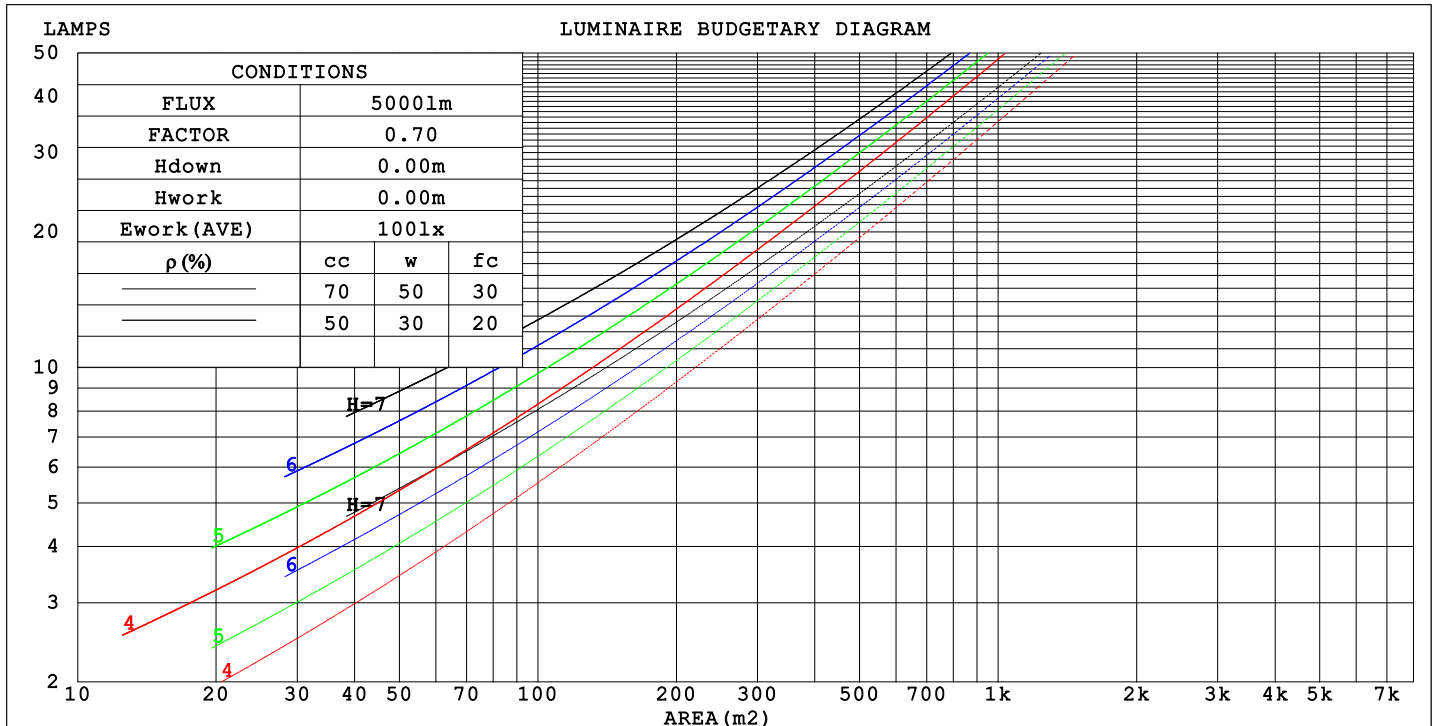
C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature: 25.3°C
 Operators:
 Test Date: 21 October 2022

γ Range: 0 - 180DEG
 γ Interval: 2.5DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.00.456
 Humidity: 65.0%
 Test Distance: 6.265m [K=1.0000]
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

NAME: 99LED838WW	TYPE:	WEIGHT: 1
SPEC.:	DIM.: F90	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: round	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															Coefficients of Utilization(CU)														
0.0	1.09	1.09	1.09	1.01	1.01	1.01	.85	.85	.85	.71	.71	.71	.59	.59	.59	.53														
1.0	.88	.82	.77	.81	.76	.71	.68	.64	.60	.56	.53	.50	.44	.42	.40	.35														
2.0	.74	.66	.60	.68	.61	.55	.57	.51	.46	.46	.42	.38	.36	.33	.30	.26														
3.0	.64	.55	.48	.59	.51	.44	.49	.42	.37	.40	.35	.30	.31	.27	.24	.20														
4.0	.56	.46	.39	.51	.43	.36	.43	.36	.31	.34	.29	.25	.27	.23	.20	.16														
5.0	.49	.40	.33	.45	.37	.30	.38	.31	.26	.30	.25	.21	.24	.20	.16	.13														
6.0	.44	.34	.28	.40	.32	.26	.34	.27	.22	.27	.22	.18	.21	.17	.14	.11														
7.0	.39	.30	.24	.36	.28	.22	.30	.24	.19	.25	.19	.15	.19	.15	.12	.09														
8.0	.35	.27	.21	.33	.25	.19	.27	.21	.16	.22	.17	.13	.18	.14	.11	.08														
9.0	.32	.24	.18	.30	.22	.17	.25	.19	.14	.20	.15	.12	.16	.12	.09	.07														
10.0	.29	.21	.16	.27	.20	.15	.23	.17	.13	.19	.14	.11	.15	.11	.08	.06														



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:
Test Date:21 October 2022

γ Range: 0 - 180DEG
γ Interval: 2.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.456
Humidity:65.0%
Test Distance:6.265m [K=1.0000]
Remarks:

WEC AND CCEC

NAME: 99LED838WW	TYPE:	WEIGHT: 1
SPEC.:	DIM.: F90	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: round	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	.412	.234	.074	.390	.222	.071	.349	.200	.064	.311	.179	.058	.276	.160	.052	
2.0	.344	.189	.058	.324	.179	.055	.286	.159	.049	.252	.141	.044	.220	.124	.039	
3.0	.300	.160	.048	.282	.151	.045	.248	.134	.041	.216	.118	.036	.186	.103	.032	
4.0	.267	.139	.041	.251	.131	.039	.219	.116	.035	.190	.102	.031	.163	.088	.027	
5.0	.241	.123	.036	.226	.116	.034	.197	.103	.030	.170	.090	.027	.145	.077	.023	
6.0	.220	.110	.032	.206	.104	.030	.179	.092	.027	.154	.080	.024	.131	.069	.020	
7.0	.202	.100	.028	.189	.094	.027	.164	.083	.024	.141	.072	.021	.119	.062	.018	
8.0	.187	.091	.026	.175	.086	.024	.152	.076	.022	.130	.066	.019	.110	.056	.016	
9.0	.174	.084	.023	.163	.079	.022	.141	.070	.020	.121	.061	.017	.102	.052	.015	
10.0	.162	.078	.022	.152	.073	.020	.132	.065	.018	.113	.056	.016	.095	.048	.014	

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	.561	.561	.561	.479	.479	.479	.327	.327	.327	.188	.188	.188	.060	.060	.060	
1.0	.561	.528	.500	.480	.454	.430	.328	.312	.297	.189	.181	.173	.060	.058	.056	
2.0	.555	.507	.467	.475	.437	.404	.326	.302	.282	.188	.176	.165	.060	.057	.054	
3.0	.548	.492	.447	.470	.424	.388	.322	.295	.272	.186	.172	.160	.060	.056	.053	
4.0	.540	.480	.434	.464	.415	.377	.319	.289	.266	.184	.169	.157	.059	.055	.052	
5.0	.533	.471	.426	.457	.408	.370	.315	.285	.261	.183	.167	.155	.059	.055	.051	
6.0	.525	.464	.419	.452	.402	.365	.312	.281	.258	.181	.165	.154	.058	.054	.051	
7.0	.519	.457	.415	.446	.396	.361	.308	.278	.256	.179	.164	.152	.058	.054	.050	
8.0	.512	.452	.411	.441	.392	.358	.305	.275	.254	.177	.162	.152	.057	.053	.050	
9.0	.506	.448	.408	.436	.389	.356	.302	.273	.253	.176	.161	.151	.057	.053	.050	
10.0	.500	.444	.406	.431	.385	.354	.299	.271	.252	.174	.160	.150	.057	.053	.050	

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:
Test Date:21 October 2022

γ Range: 0 - 180DEG
γ Interval: 2.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.456
Humidity:65.0%
Test Distance:6.265m [K=1.0000]
Remarks:

UGR(Unified Glare Rating) Table

NAME: 99LED838WW					TYPE:			WEIGHT: 1		
SPEC.:					DIM.: F90			SERIAL No.: 0		
MFR.: Elmark Industries JSC					SUR.: round			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	26.8	27.9	27.6	28.7	29.8	26.9	28.0	27.8	28.9	30.0
3H	30.0	31.0	30.9	31.9	33.0	30.2	31.2	31.1	32.1	33.3
4H	31.8	32.8	32.7	33.7	34.9	32.1	33.0	33.0	33.9	35.1
6H	33.9	34.8	34.8	35.7	36.9	34.2	35.0	35.1	36.0	37.1
8H	35.0	35.9	35.9	36.8	38.0	35.3	36.2	36.2	37.1	38.3
12H	36.3	37.1	37.2	38.1	39.3	36.6	37.4	37.5	38.4	39.6
4H 2H	27.8	28.7	28.7	29.6	30.8	27.9	28.8	28.8	29.7	30.9
3H	31.1	32.0	32.0	32.9	34.1	31.3	32.1	32.2	33.1	34.3
4H	33.1	33.8	34.0	34.8	36.0	33.3	34.0	34.2	35.0	36.2
6H	35.3	36.0	36.2	36.9	38.2	35.5	36.2	36.5	37.2	38.4
8H	36.5	37.1	37.5	38.1	39.4	36.8	37.4	37.7	38.4	39.6
12H	37.9	38.5	38.9	39.5	40.8	38.2	38.8	39.1	39.7	41.0
8H 4H	33.8	34.5	34.8	35.4	36.7	34.0	34.6	34.9	35.6	36.9
6H	36.3	36.8	37.3	37.8	39.1	36.5	37.0	37.4	38.0	39.3
8H	37.7	38.2	38.7	39.2	40.5	37.9	38.4	38.9	39.4	40.7
12H	39.3	39.7	40.3	40.7	42.1	39.5	39.9	40.5	41.0	42.3
12H 4H	34.0	34.6	35.0	35.6	36.9	34.2	34.8	35.1	35.7	37.0
6H	36.6	37.1	37.6	38.1	39.4	36.8	37.2	37.8	38.3	39.6
8H	38.1	38.5	39.1	39.6	40.9	38.3	38.7	39.3	39.7	41.1
Variations with the observer position at spacings(CIE Pub.117):										
S = 1.0H	+ 0.1 / - 0.1					+ 0.1 / - 0.1				
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.3				
2.0H	+ 0.3 / - 0.4					+ 0.3 / - 0.4				

CIE Pub.117, 806.0 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -0.7)
Area: 0.001 m2

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:
Test Date:21 October 2022

γ Range: 0 - 180DEG
γ Interval: 2.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.456
Humidity:65.0%
Test Distance:6.265m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

NAME: 99LED838WW	TYPE:	WEIGHT: 1
SPEC.:	DIM.: F90	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: round	Shielding Angle:

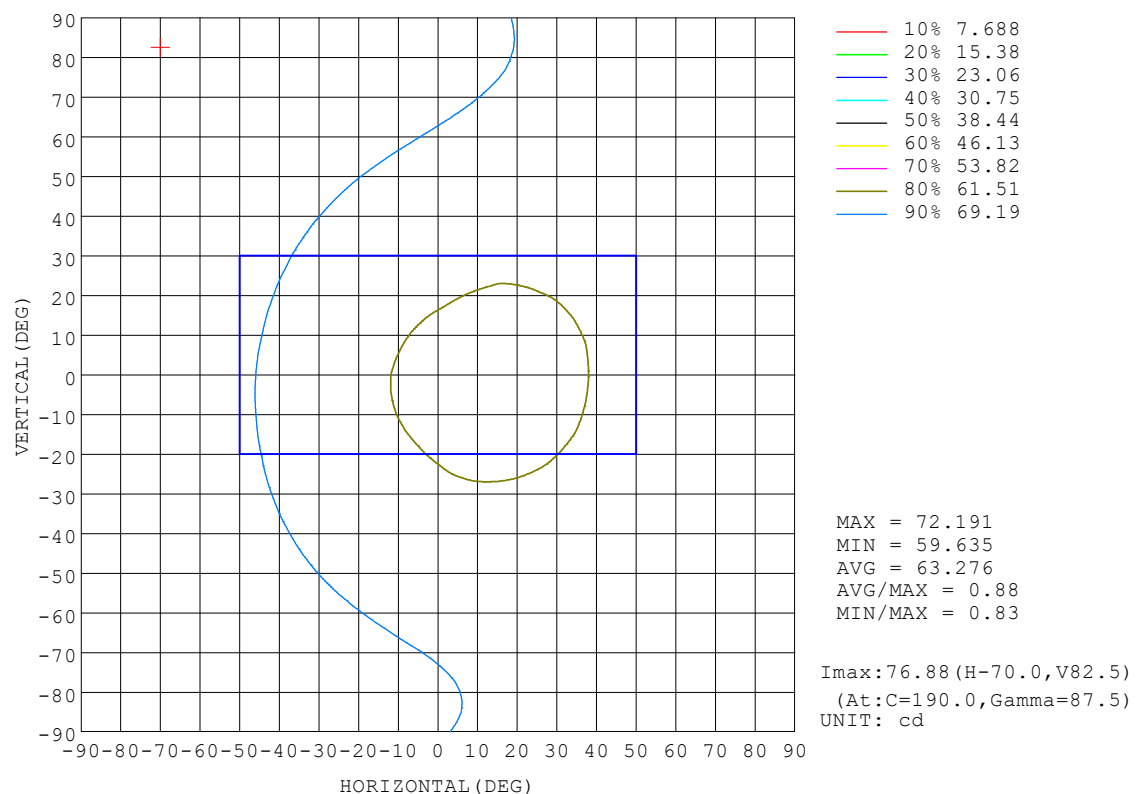
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	37	25	17	35	23	17	32	22	15	8
0.80	46	32	24	43	30	23	38	27	21	11
1.00	53	39	30	50	37	28	44	35	26	14
1.25	60	46	36	56	43	34	49	38	31	17
1.50	65	51	42	61	48	39	52	42	35	20
2.00	73	60	51	68	56	48	58	49	42	24
2.50	78	66	57	72	62	53	62	53	47	27
3.00	82	71	62	76	66	58	65	57	51	29
4.00	87	78	70	81	72	65	69	62	57	33
5.00	91	83	75	84	77	70	71	65	60	35
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: 25.3°C
Operators:
Test Date: 21 October 2022

γ Range: 0 - 180DEG
γ Interval: 2.5DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.00.456
Humidity: 65.0%
Test Distance: 6.265m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

NAME: 99LED838WW	TYPE:	WEIGHT: 1
SPEC.:	DIM.: F90	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: round	Shielding Angle:

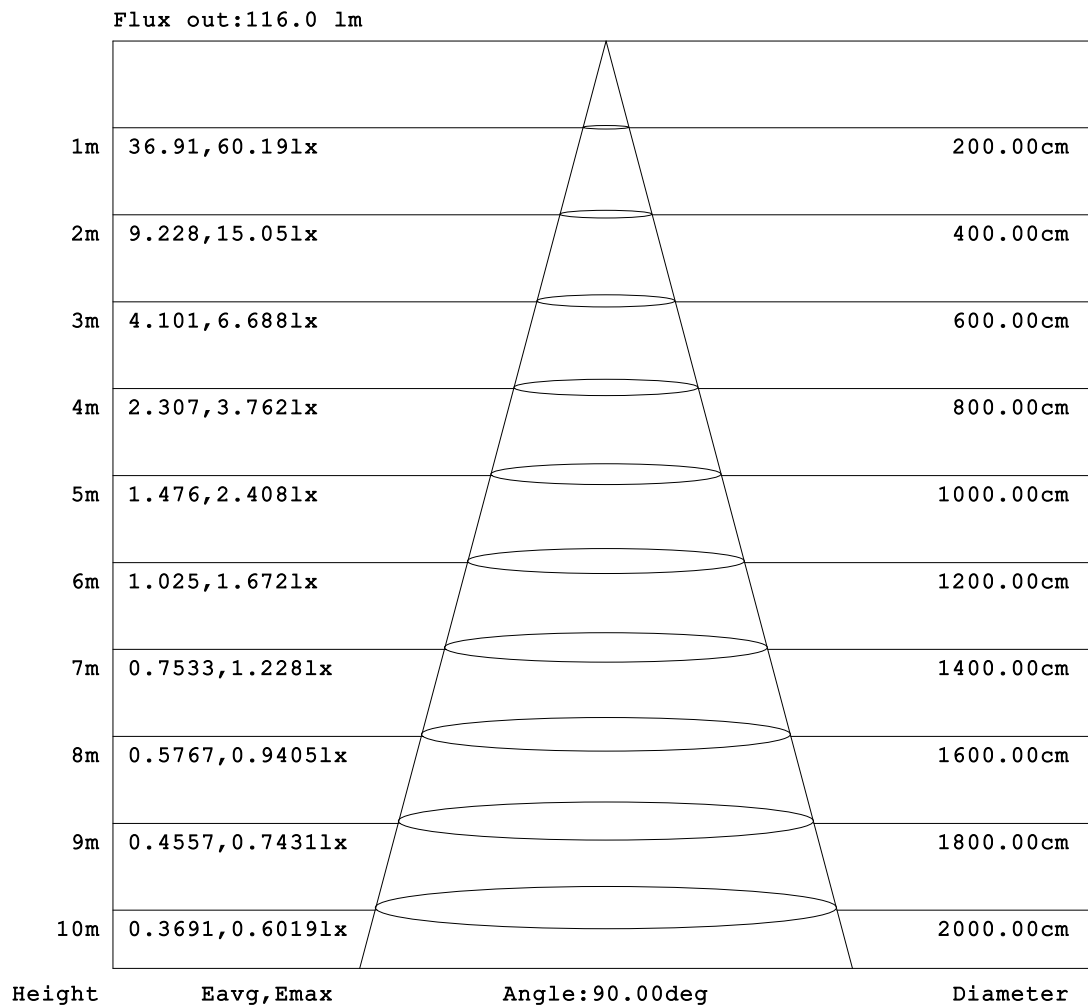


C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.3°C
Operators:
Test Date: 21 October 2022

γ Range: 0 - 180DEG
γ Interval: 2.5DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.00.456
Humidity: 65.0%
Test Distance: 6.265m [K=1.0000]
Remarks:

AAI Figure

NAME: 99LED838WW	TYPE:	WEIGHT: 1
SPEC.:	DIM.: F90	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: round	Shielding Angle:



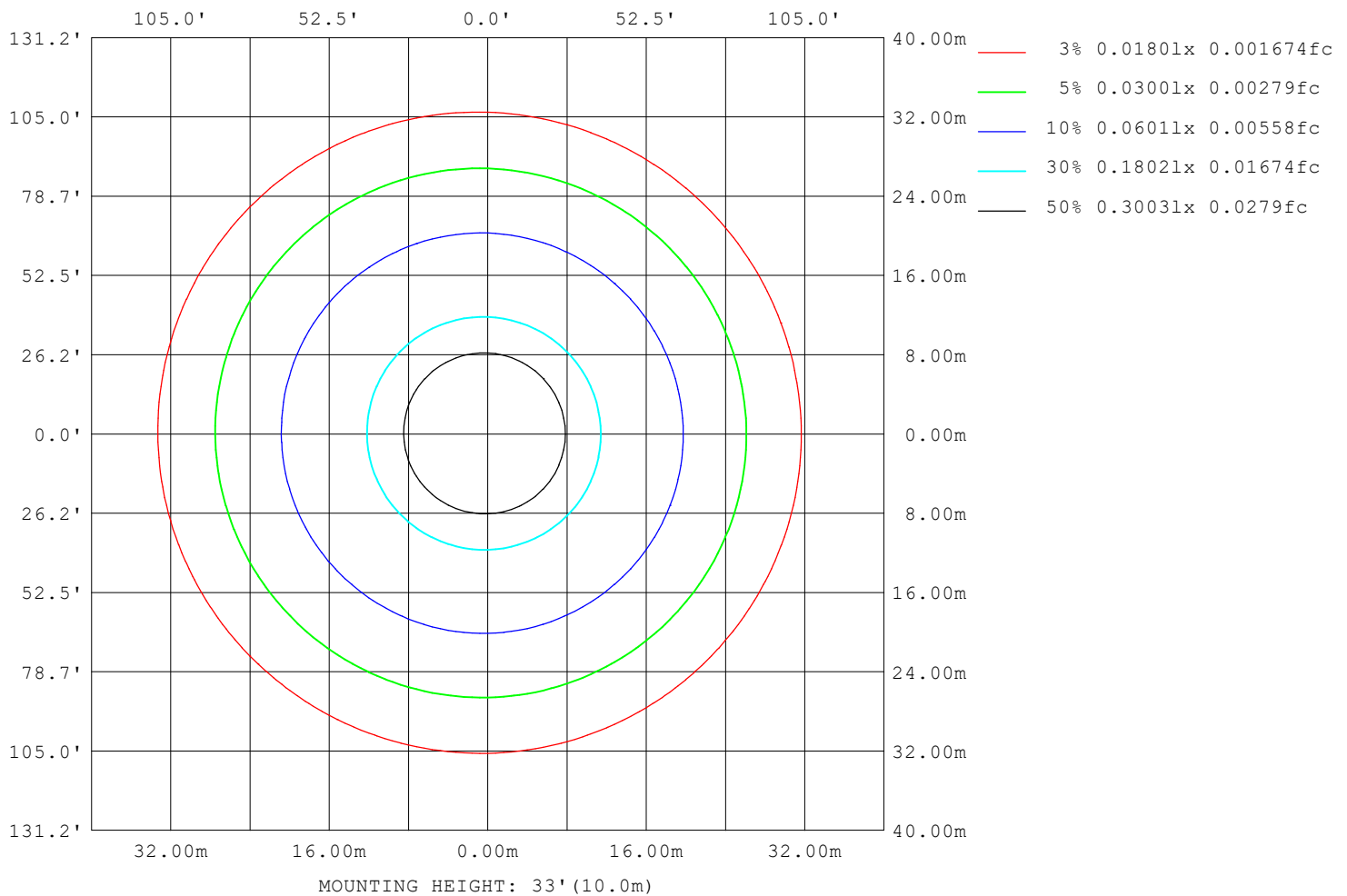
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature: 25.3°C
 Operators:
 Test Date: 21 October 2022

γ Range: 0 - 180DEG
 γ Interval: 2.5DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.00.456
 Humidity: 65.0%
 Test Distance: 6.265m [K=1.0000]
 Remarks:

ISOLUX DIAGRAM

NAME: 99LED838WW	TYPE:	WEIGHT: 1
SPEC.:	DIM.: F90	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: round	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.3°C
Operators:
Test Date: 21 October 2022

γ Range: 0 - 180DEG
γ Interval: 2.5DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.00.456
Humidity: 65.0%
Test Distance: 6.265m [K=1.0000]
Remarks:

LED Avg.L Report

NAME: 99LED838WW	TYPE:	WEIGHT: 1
SPEC.:	DIM.: F90	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: round	Shielding Angle:

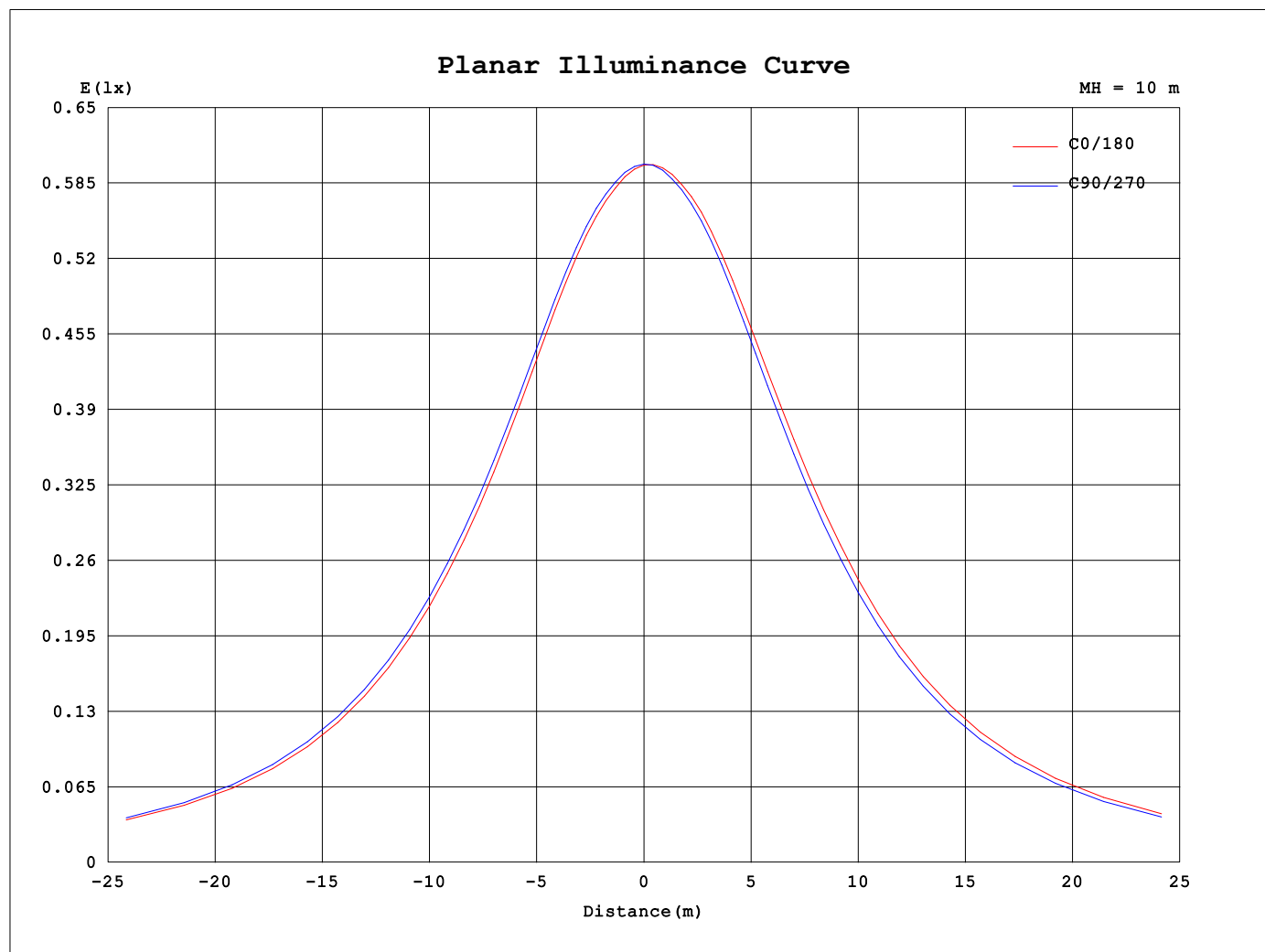
AvgL	cd/m2
L_0~180 (65) av	165110
L_0~180 (75) av	274478
L_0~180 (85) av	819853
L_90~270 (65) av	163017
L_90~270 (75) av	270597
L_90~270 (85) av	807773
L_45 (65) av	163862
L_45 (75) av	272194
L_45 (85) av	812861

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:
Test Date:21 October 2022

γ Range: 0 - 180DEG
γ Interval: 2.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.456
Humidity:65.0%
Test Distance:6.265m [K=1.0000]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.3°C
Operators:
Test Date: 21 October 2022

γ Range: 0 - 180DEG
 γ Interval: 2.5DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.00.456
Humidity: 65.0%
Test Distance: 6.265m [K=1.0000]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

NAME: 99LED838WW	TYPE:	WEIGHT: 1
SPEC.:	DIM.: F90	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: round	Shielding Angle:

Table--1

UNIT: cd

C (DEG) γ (DEG)	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
0	60.1	60.1	60.1	60.1	60.1	60.1	60.1	60.1	60.1	60.1	60.1	60.1	60.1	60.1	60.1	60.1	60.1	60.1	60.1
5	59.8	59.8	59.8	59.8	59.8	59.9	59.9	60.0	60.0	60.1	60.1	60.2	60.3	60.4	60.4	60.5	60.5	60.6	60.6
10	59.7	59.7	59.7	59.8	59.8	59.9	59.9	60.0	60.1	60.3	60.4	60.5	60.6	60.8	60.9	61.0	61.1	61.2	61.2
15	60.0	60.0	60.0	60.0	60.1	60.2	60.3	60.4	60.6	60.8	60.9	61.1	61.3	61.5	61.7	61.9	62.0	62.1	62.2
20	60.3	60.2	60.2	60.3	60.4	60.5	60.6	60.8	61.0	61.2	61.5	61.8	62.0	62.3	62.5	62.8	63.0	63.1	63.2
25	60.5	60.5	60.5	60.5	60.6	60.8	60.9	61.2	61.4	61.7	62.0	62.3	62.7	63.0	63.3	63.6	63.8	64.0	64.1
30	60.9	60.8	60.8	60.9	61.0	61.2	61.4	61.7	61.9	62.3	62.6	63.0	63.4	63.8	64.1	64.5	64.8	65.0	65.2
35	61.2	61.2	61.3	61.4	61.5	61.7	61.9	62.2	62.6	63.0	63.3	63.8	64.2	64.7	65.1	65.6	65.9	66.2	66.4
40	61.8	61.8	61.9	62.0	62.2	62.4	62.6	63.0	63.3	63.7	64.2	64.7	65.2	65.7	66.2	66.7	67.1	67.4	67.6
45	62.5	62.5	62.6	62.7	62.9	63.2	63.4	63.8	64.2	64.6	65.1	65.7	66.2	66.8	67.4	67.9	68.4	68.8	69.0
50	63.2	63.3	63.4	63.5	63.7	64.0	64.3	64.6	65.1	65.6	66.2	66.7	67.3	68.0	68.6	69.2	69.7	70.1	70.4
55	63.9	64.0	64.1	64.3	64.5	64.8	65.1	65.5	66.0	66.6	67.1	67.8	68.4	69.1	69.8	70.5	71.1	71.5	71.8
60	64.6	64.7	64.8	65.0	65.2	65.5	65.9	66.4	66.9	67.5	68.1	68.7	69.4	70.2	71.0	71.7	72.3	72.8	73.1
65	65.3	65.3	65.4	65.6	65.8	66.2	66.6	67.1	67.6	68.3	68.9	69.6	70.3	71.1	71.9	72.7	73.4	73.9	74.3
70	65.7	65.8	65.9	66.1	66.4	66.7	67.1	67.6	68.2	68.9	69.6	70.3	71.1	71.9	72.7	73.6	74.3	74.9	75.3
75	66.1	66.1	66.2	66.4	66.7	67.1	67.5	68.1	68.7	69.3	70.0	70.8	71.6	72.5	73.4	74.2	75.0	75.6	76.0
80	66.3	66.3	66.4	66.6	66.9	67.3	67.7	68.3	68.9	69.6	70.3	71.1	71.9	72.8	73.8	74.6	75.4	76.1	76.5
85	66.2	66.2	66.3	66.6	66.9	67.2	67.7	68.2	68.9	69.6	70.3	71.2	72.0	72.9	73.9	74.8	75.6	76.3	76.7
90	66.0	66.0	66.1	66.3	66.6	67.0	67.5	68.0	68.7	69.4	70.2	71.0	71.9	72.8	73.7	74.6	75.5	76.2	76.6
95	65.6	65.6	65.7	66.0	66.3	66.7	67.1	67.7	68.3	69.0	69.8	70.6	71.5	72.5	73.4	74.3	75.1	75.9	76.4
100	65.0	65.0	65.1	65.4	65.7	66.1	66.6	67.1	67.7	68.5	69.3	70.1	71.0	71.9	72.8	73.7	74.5	75.2	75.8
105	64.2	64.2	64.3	64.6	64.9	65.3	65.8	66.3	67.0	67.7	68.5	69.3	70.2	71.1	72.0	72.9	73.7	74.4	74.9
110	63.3	63.3	63.4	63.7	64.0	64.4	64.8	65.4	66.0	66.8	67.5	68.4	69.2	70.1	71.0	71.9	72.6	73.3	73.8
115	62.2	62.2	62.3	62.5	62.9	63.3	63.7	64.3	64.9	65.7	66.4	67.2	68.1	69.0	69.8	70.6	71.3	72.0	72.5
120	61.0	61.0	61.1	61.3	61.6	62.0	62.5	63.1	63.7	64.4	65.2	66.0	66.8	67.6	68.5	69.2	69.9	70.5	71.0
125	59.7	59.7	59.7	60.0	60.2	60.7	61.1	61.7	62.3	63.0	63.8	64.6	65.3	66.2	66.9	67.7	68.3	68.9	69.4
130	58.2	58.2	58.3	58.5	58.7	59.1	59.6	60.2	60.8	61.5	62.2	63.0	63.7	64.5	65.2	65.9	66.5	67.1	67.5
135	56.6	56.5	56.6	56.8	57.1	57.5	57.9	58.5	59.1	59.8	60.4	61.2	61.9	62.6	63.3	64.0	64.5	65.0	65.4
140	54.7	54.7	54.7	55.0	55.2	55.6	56.0	56.6	57.1	57.8	58.5	59.2	59.9	60.6	61.2	61.8	62.3	62.7	63.0
145	51.9	52.0	52.1	52.3	52.5	52.9	53.3	53.9	54.5	55.2	55.8	56.5	57.2	57.9	58.5	59.1	59.5	59.9	60.1
150	48.0	48.3	48.5	48.8	48.9	49.1	49.3	50.1	51.0	51.7	52.3	53.0	53.6	54.5	55.1	55.4	55.8	56.2	56.4
155	43.3	43.6	43.8	44.1	44.2	44.3	44.3	45.2	46.1	47.2	47.9	48.6	49.2	49.9	50.4	50.8	51.1	51.5	51.7
160	37.5	37.6	38.0	38.4	38.5	38.7	38.7	39.2	40.5	41.5	42.5	43.2	43.5	44.1	44.7	45.2	45.5	45.8	46.1
165	30.5	30.7	30.8	31.3	31.4	31.8	32.0	32.5	33.3	34.8	35.6	36.5	37.0	37.5	38.0	38.6	38.9	39.3	39.5
170	22.7	22.7	22.7	23.0	23.1	23.5	23.8	24.3	24.9	26.2	27.2	28.1	28.8	29.4	29.7	30.3	30.5	30.8	31.0
175	9.93	9.97	9.92	10.2	10.2	10.7	11.3	12.4	13.4	14.2	14.5	15.2	15.5	16.1	16.3	16.8	16.9	17.3	16.2
180	0.78	0.78	0.78	0.78	0.79	0.78	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.80	0.79	0.79	0.79	0.78

C Range: 0 - 360DEG

C Interval: 10.0DEG

Test Speed: HIGH

Temperature:25.3°C

Operators:

Test Date:21 October 2022

γ Range: 0 - 180DEG

γ Interval: 2.5DEG

Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.456

Humidity:65.0%

Test Distance:6.265m [K=1.0000]

Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

NAME: 99LED838WW	TYPE:	WEIGHT: 1
SPEC.:	DIM.: F90	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: round	Shielding Angle:

Table--2

UNIT: cd

C (DEG) γ (DEG)	190	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350		
0	60.1	60.1	60.1	60.1	60.1	60.1	60.1	60.1	60.1	60.1	60.1	60.1	60.1	60.1	60.1	60.1	60.1		
5	60.6	60.6	60.6	60.6	60.5	60.5	60.4	60.3	60.3	60.2	60.1	60.1	60.0	59.9	59.9	59.8	59.8		
10	61.2	61.2	61.2	61.1	61.1	61.0	60.9	60.7	60.6	60.5	60.3	60.2	60.1	60.0	59.9	59.8	59.8		
15	62.3	62.2	62.2	62.1	62.0	61.9	61.7	61.5	61.3	61.1	60.9	60.7	60.5	60.3	60.2	60.1	60.0		
20	63.2	63.3	63.2	63.1	63.0	62.8	62.5	62.3	62.0	61.7	61.4	61.1	60.9	60.7	60.5	60.4	60.3		
25	64.2	64.2	64.1	64.0	63.8	63.6	63.2	62.9	62.5	62.2	61.8	61.5	61.2	61.0	60.8	60.6	60.5		
30	65.3	65.2	65.2	65.0	64.7	64.4	64.0	63.6	63.2	62.8	62.4	62.0	61.6	61.4	61.2	61.0	60.9		
35	66.5	66.4	66.3	66.1	65.8	65.4	64.9	64.5	64.0	63.5	63.0	62.5	62.1	61.8	61.6	61.4	61.2		
40	67.8	67.7	67.6	67.3	66.9	66.5	66.0	65.4	64.8	64.2	63.7	63.2	62.7	62.4	62.1	61.9	61.8		
45	69.2	69.1	69.0	68.6	68.2	67.7	67.1	66.4	65.8	65.1	64.5	64.0	63.5	63.1	62.8	62.6	62.5		
50	70.6	70.5	70.4	70.0	69.5	68.9	68.2	67.5	66.8	66.0	65.4	64.7	64.2	63.8	63.5	63.3	63.2		
55	72.0	71.9	71.7	71.3	70.8	70.1	69.4	68.5	67.8	67.0	66.2	65.5	65.0	64.5	64.2	64.0	63.9		
60	73.3	73.2	73.0	72.6	72.0	71.3	70.5	69.6	68.7	67.8	67.0	66.3	65.7	65.2	64.9	64.7	64.6		
65	74.5	74.4	74.2	73.7	73.1	72.3	71.4	70.5	69.5	68.6	67.7	67.0	66.3	65.8	65.5	65.3	65.2		
70	75.5	75.4	75.1	74.6	74.0	73.2	72.2	71.2	70.2	69.3	68.3	67.5	66.9	66.3	65.9	65.7	65.6		
75	76.2	76.1	75.9	75.4	74.7	73.8	72.8	71.8	70.8	69.7	68.8	68.0	67.3	66.7	66.3	66.1	66.0		
80	76.7	76.6	76.4	75.9	75.1	74.3	73.2	72.2	71.1	70.0	69.1	68.2	67.5	66.9	66.5	66.2	66.1		
85	76.9	76.9	76.6	76.1	75.4	74.5	73.4	72.3	71.2	70.1	69.1	68.3	67.5	66.9	66.5	66.2	66.1		
90	76.8	76.8	76.6	76.0	75.3	74.4	73.3	72.2	71.1	70.1	69.0	68.1	67.4	66.8	66.3	66.1	65.9		
95	76.6	76.6	76.3	75.8	75.0	74.1	73.0	72.0	70.9	69.8	68.8	67.9	67.1	66.5	66.0	65.7	65.6		
100	76.0	76.0	75.7	75.2	74.5	73.6	72.5	71.5	70.4	69.3	68.3	67.4	66.6	66.0	65.5	65.2	65.0		
105	75.2	75.2	74.9	74.4	73.7	72.8	71.8	70.7	69.6	68.6	67.6	66.7	65.9	65.3	64.8	64.5	64.3		
110	74.1	74.1	73.8	73.3	72.6	71.8	70.7	69.7	68.7	67.6	66.6	65.8	65.0	64.4	63.9	63.6	63.4		
115	72.8	72.8	72.5	72.0	71.3	70.5	69.5	68.6	67.5	66.5	65.5	64.7	64.0	63.4	62.9	62.6	62.3		
120	71.3	71.3	71.0	70.5	69.9	69.1	68.2	67.2	66.2	65.3	64.4	63.6	62.8	62.2	61.8	61.4	61.2		
125	69.6	69.6	69.3	68.9	68.2	67.5	66.6	65.7	64.8	63.9	63.0	62.2	61.5	60.9	60.5	60.1	59.9		
130	67.7	67.7	67.4	67.0	66.4	65.7	64.8	64.0	63.1	62.3	61.4	60.7	60.0	59.4	59.0	58.6	58.4		
135	65.5	65.5	65.3	64.9	64.3	63.7	62.9	62.1	61.3	60.5	59.7	59.0	58.3	57.8	57.3	57.0	56.7		
140	63.2	63.2	62.9	62.6	62.0	61.4	60.7	60.0	59.2	58.5	57.7	57.0	56.4	55.9	55.4	55.1	54.8		
145	60.2	60.2	60.0	59.7	59.2	58.6	57.9	57.2	56.5	55.8	55.0	54.4	53.8	53.2	52.8	52.4	52.2		
150	56.4	56.4	56.2	55.9	55.5	54.9	54.2	53.6	52.8	52.2	51.5	50.9	50.3	49.8	49.3	48.9	48.2		
155	51.7	51.8	51.5	51.2	50.7	50.2	49.5	49.0	48.2	47.7	46.9	46.4	45.7	45.3	44.7	43.8	43.2		
160	46.1	46.1	45.9	45.6	45.2	44.6	43.9	43.6	43.0	42.4	41.7	41.2	40.5	39.9	38.8	37.8	37.7		
165	39.5	39.5	39.3	39.0	38.5	38.0	37.4	37.0	36.5	36.0	35.3	34.8	34.0	33.1	31.7	30.6	30.1		
170	31.1	31.1	30.9	30.8	30.4	30.1	29.6	29.2	28.6	28.1	27.3	26.6	25.7	24.9	23.7	23.0	22.0		
175	16.3	16.6	16.5	16.7	16.5	16.5	16.1	15.9	15.3	15.0	14.4	14.1	13.5	13.2	12.6	11.7	10.5		
180	0.78	0.78	0.79	0.78	0.79	0.79	0.79	0.79	0.80	0.79	0.80	0.79	0.80	0.79	0.79	0.79	0.79		

C Range: 0 - 360DEG

C Interval: 10.0DEG

Test Speed: HIGH

Temperature:25.3°C

Operators:

Test Date:21 October 2022

γ Range: 0 - 180DEG

γ Interval: 2.5DEG

Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.456

Humidity:65.0%

Test Distance:6.265m [K=1.0000]

Remarks: