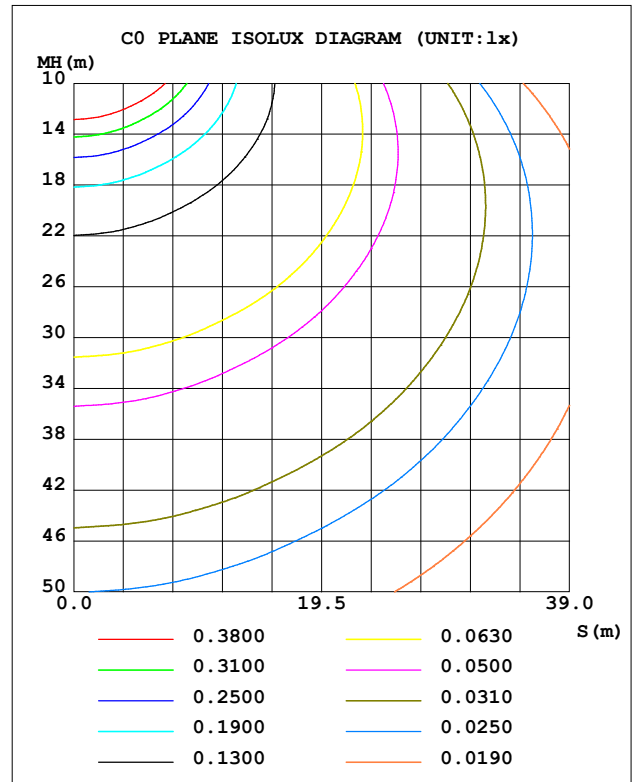
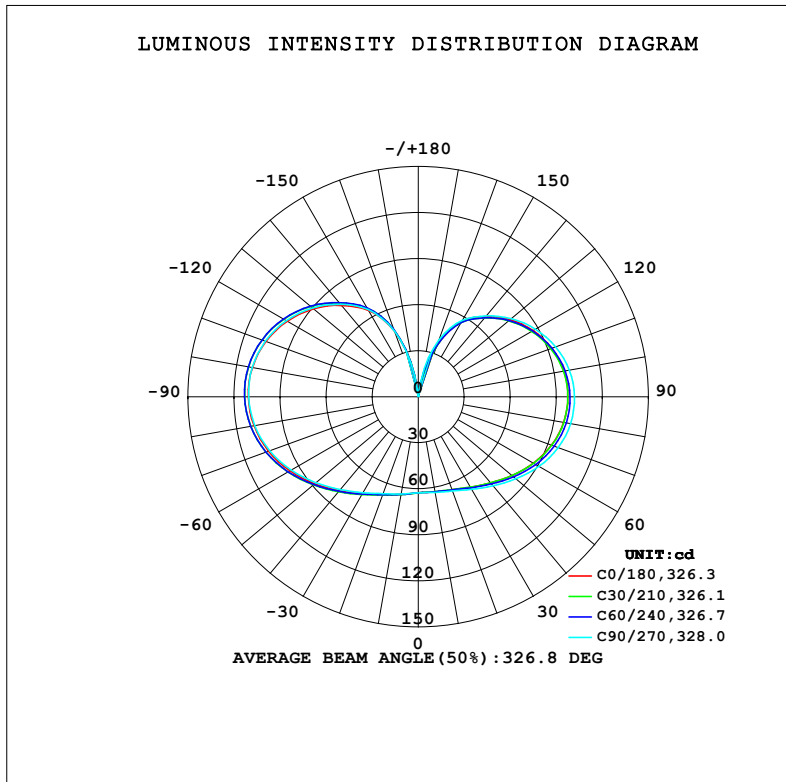


## LUMINAIRE PHOTOMETRIC TEST REPORT

NAME: 99LED834WW	TYPE:	WEIGHT: 1
SPEC.:	DIM.: F60	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: round	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA			
MODEL	99LED834WW	I <sub>max</sub> (cd)	113.6	S/MH (C0/180)	1.91
NOMINAL POWER (W)	9	LOR (%)	115.5	S/MH (C90/270)	1.89
RATED VOLTAGE (V)	230	TOTAL FLUX (lm)	1097.2	η UP, DN (C0-180)	27.1, 29.0
NOMINAL FLUX (lm)	950	CIE CLASS	DIFFUSE	η UP, DN (C180-360)	29.3, 30.2
LAMPS INSIDE	1	η up (%)	56.4	CIBSE SHR NOM	2.00
TEST VOLTAGE (V)	230	η down (%)	59.1	CIBSE SHR MAX	2.00



C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: HIGH  
Temperature: 25.3°C  
Operators:  
Test Date: 20 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:

$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	%lum, lamp
10	62.99	62.83	63.31	64.06	64.61	64.81	64.37	63.52	0- 10	6.041	6.041	0.55,0.64
20	64.50	64.40	65.35	66.76	67.79	68.10	67.21	65.63	10- 20	18.43	24.47	2.23,2.58
30	68.16	68.20	69.69	71.63	73.14	73.60	72.28	69.81	20- 30	31.69	56.17	5.12,5.91
40	73.31	73.62	75.79	78.20	80.01	80.77	79.00	75.58	30- 40	46.45	102.6	9.35,10.8
50	79.83	80.44	83.20	86.11	88.21	89.38	87.19	82.71	40- 50	62.61	165.2	15.1,17.4
60	86.60	87.49	90.80	94.22	96.63	98.26	95.64	90.24	50- 60	79.55	244.8	22.3,25.8
70	92.38	93.42	97.05	101.0	103.8	105.9	103.0	96.79	60- 70	95.29	340.1	31,35.8
80	96.14	97.13	100.8	105.3	108.7	111.2	108.2	101.4	70- 80	107.5	447.5	40.8,47.1
90	97.49	98.12	101.8	106.7	110.8	113.5	110.5	103.3	80- 90	114.2	561.7	51.2,59.1
100	96.36	96.53	99.96	105.1	109.8	112.7	109.8	102.6	90-100	114.5	676.2	61.6,71.2
110	92.51	92.15	95.27	100.5	105.6	108.7	106.0	98.89	100-110	108.2	784.4	71.5,82.6
120	86.36	85.50	88.18	93.32	98.62	101.6	99.31	92.69	110-120	96.10	880.5	80.2,92.7
130	78.21	77.09	79.27	84.03	89.18	91.98	90.04	84.11	120-130	79.82	960.3	87.5,101
140	68.22	66.95	69.06	73.08	77.77	80.26	78.66	73.54	130-140	61.26	1022	93.1,108
150	56.86	55.56	57.58	61.12	65.09	67.09	65.75	61.64	140-150	42.62	1064	97,112
160	35.26	33.65	39.43	42.37	45.47	46.73	45.48	42.16	150-160	24.46	1089	99.2,115
170	8.663	7.018	10.96	12.80	13.69	14.53	13.59	11.93	160-170	8.125	1097	100,115
180	0.8106	0.8148	0.8220	0.8251	0.8134	0.8162	0.8220	0.8251	170-180	0.4180	1097	100,115
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 131.82 lm

%lum = 12.0%

%lamp = 13.9%

Conical surface Flux(130deg): 290.62 lm

%lum = 26.5%

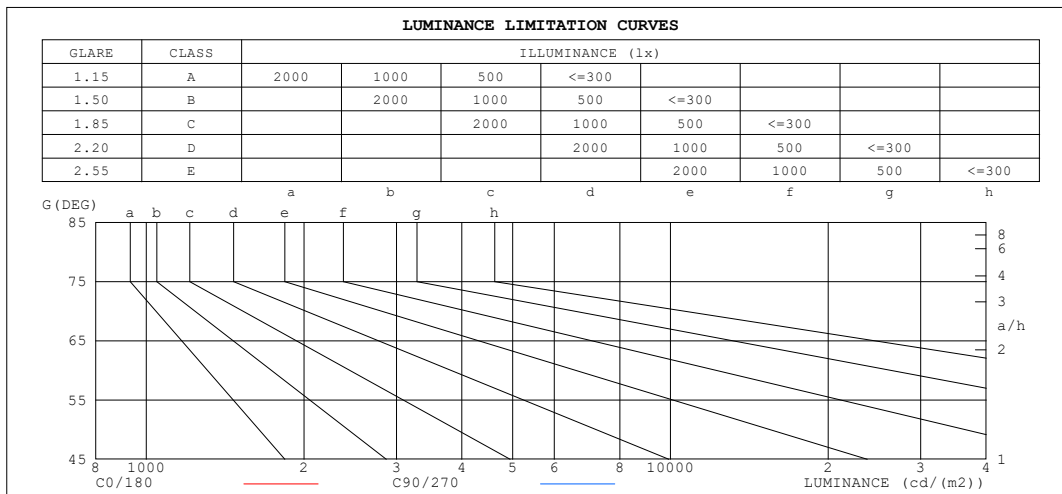
%lamp = 30.6%

C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: HIGH  
Temperature:25.3°C  
Operators:  
Test Date:20 October 2022

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  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: 99LED834WW	TYPE:	WEIGHT: 1
SPEC.:	DIM.: F60	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: round	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	1115475	1166056
80	554006	580442
75	365479	383546
70	270265	283751
65	212387	222843
60	173322	181616
55	145260	151854
50	124278	129446
45	108134	112213

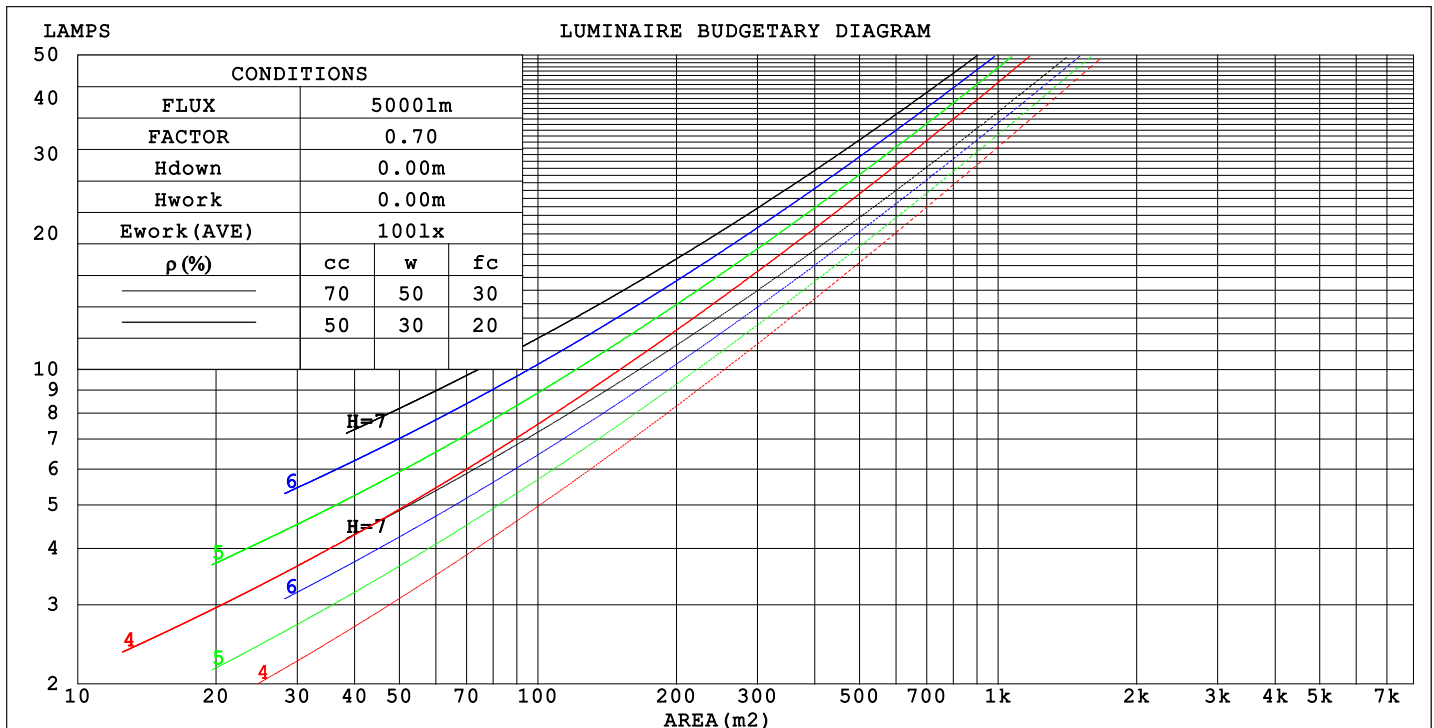
C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: HIGH  
Temperature: 25.3°C  
Operators:  
Test Date: 20 October 2022

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: 99LED834WW	TYPE:	WEIGHT: 1
SPEC.:	DIM.: F60	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: round	Shielding Angle:

$\rho_{cc}$	80%			70%			50%			30%			10%			0
$\rho_w$	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
$\rho_{fc}$	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio															
	Coefficients of Utilization(CU)															
0.0	1.24	1.24	1.24	1.15	1.15	1.15	.97	.97	.97	.81	.81	.81	.66	.66	.66	.59
1.0	.00	.93	.87	.91	.85	.80	.76	.71	.67	.62	.58	.55	.49	.46	.44	.37
2.0	.84	.74	.66	.77	.68	.61	.63	.57	.51	.51	.46	.42	.40	.36	.33	.27
3.0	.72	.61	.53	.66	.56	.49	.54	.47	.41	.44	.38	.33	.34	.29	.25	.20
4.0	.63	.52	.43	.57	.47	.40	.47	.39	.33	.38	.32	.27	.29	.24	.21	.16
5.0	.55	.44	.36	.50	.41	.33	.42	.34	.28	.33	.27	.22	.26	.21	.17	.13
6.0	.49	.38	.30	.45	.35	.28	.37	.29	.23	.30	.24	.19	.23	.18	.14	.11
7.0	.44	.33	.26	.40	.31	.24	.33	.26	.20	.27	.21	.16	.21	.16	.12	.09
8.0	.39	.30	.23	.36	.27	.21	.30	.23	.18	.24	.18	.14	.19	.14	.11	.08
9.0	.36	.26	.20	.33	.24	.18	.27	.20	.15	.22	.17	.12	.17	.13	.09	.07
10.0	.33	.24	.18	.30	.22	.16	.25	.18	.14	.20	.15	.11	.16	.12	.08	.06



C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: HIGH  
Temperature: 25.3°C  
Operators:  
Test Date: 20 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: 99LED834WW	TYPE:	WEIGHT: 1
SPEC.:	DIM.: F60	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	.487	.277	.088	.462	.263	.084	.414	.238	.076	.370	.213	.068	.329	.191	.062	
2.0	.404	.221	.068	.380	.210	.065	.337	.187	.058	.296	.166	.052	.259	.147	.046	
3.0	.350	.187	.056	.329	.176	.053	.289	.157	.048	.252	.138	.042	.218	.121	.037	
4.0	.311	.162	.048	.292	.153	.045	.255	.135	.040	.221	.119	.036	.189	.103	.031	
5.0	.280	.143	.041	.262	.135	.039	.228	.119	.035	.197	.104	.031	.168	.090	.027	
6.0	.255	.128	.037	.238	.120	.035	.207	.106	.031	.178	.093	.027	.151	.079	.024	
7.0	.234	.116	.033	.219	.109	.031	.190	.096	.028	.163	.083	.024	.137	.071	.021	
8.0	.216	.105	.030	.202	.099	.028	.175	.087	.025	.150	.076	.022	.126	.065	.019	
9.0	.200	.097	.027	.187	.091	.026	.162	.080	.023	.139	.070	.020	.117	.059	.017	
10.0	.187	.090	.025	.175	.084	.024	.152	.074	.021	.130	.064	.018	.109	.055	.016	

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	.649	.649	.649	.555	.555	.555	.379	.379	.379	.218	.218	.218	.070	.070	.070	
1.0	.650	.612	.578	.556	.525	.497	.381	.361	.344	.219	.209	.200	.070	.067	.065	
2.0	.644	.588	.541	.551	.506	.468	.378	.350	.326	.218	.204	.191	.070	.066	.062	
3.0	.636	.571	.519	.545	.492	.450	.374	.342	.315	.216	.200	.186	.069	.065	.061	
4.0	.627	.557	.504	.538	.482	.438	.370	.336	.308	.214	.197	.182	.069	.064	.060	
5.0	.618	.547	.494	.531	.473	.430	.366	.331	.304	.212	.194	.180	.068	.063	.059	
6.0	.610	.538	.487	.524	.466	.424	.362	.326	.300	.210	.192	.178	.068	.063	.059	
7.0	.602	.531	.482	.518	.461	.420	.358	.323	.298	.208	.190	.177	.067	.062	.059	
8.0	.595	.525	.478	.512	.456	.417	.354	.320	.296	.206	.189	.176	.067	.062	.058	
9.0	.587	.520	.475	.506	.452	.414	.351	.317	.294	.204	.187	.175	.066	.062	.058	
10.0	.581	.516	.473	.501	.448	.412	.347	.315	.293	.203	.186	.175	.066	.061	.058	

C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: HIGH  
Temperature:25.3°C  
Operators:  
Test Date:20 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: 99LED834WW					TYPE:			WEIGHT: 1			
SPEC.:					DIM.: F60			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	27.1	28.2	27.9	29.0	30.2	27.3	28.4	28.1	29.3	30.4	
	30.5	31.6	31.4	32.5	33.6	30.8	31.8	31.7	32.7	33.9	
	32.5	33.5	33.4	34.4	35.6	32.8	33.7	33.7	34.7	35.8	
	34.7	35.6	35.6	36.5	37.7	35.0	35.9	35.9	36.8	38.0	
	35.9	36.7	36.8	37.7	38.9	36.2	37.0	37.1	38.0	39.2	
	37.2	38.1	38.2	39.0	40.2	37.5	38.4	38.5	39.3	40.5	
4H 2H	28.2	29.1	29.1	30.0	31.2	28.3	29.3	29.2	30.2	31.4	
	31.7	32.6	32.6	33.5	34.7	31.9	32.8	32.8	33.7	34.9	
	33.8	34.6	34.7	35.5	36.8	34.0	34.8	35.0	35.7	37.0	
	36.1	36.8	37.1	37.8	39.0	36.3	37.0	37.3	38.0	39.3	
	37.4	38.0	38.3	39.0	40.3	37.6	38.3	38.6	39.3	40.5	
	38.8	39.4	39.8	40.4	41.7	39.1	39.7	40.1	40.7	42.0	
8H 4H	34.6	35.2	35.5	36.2	37.5	34.7	35.4	35.7	36.4	37.6	
	37.1	37.7	38.1	38.7	40.0	37.3	37.9	38.3	38.9	40.2	
	38.6	39.1	39.6	40.1	41.4	38.8	39.3	39.8	40.3	41.6	
	40.2	40.7	41.2	41.7	43.0	40.5	40.9	41.5	41.9	43.3	
12H 4H	34.8	35.4	35.8	36.4	37.7	34.9	35.5	35.9	36.5	37.8	
	37.5	37.9	38.5	39.0	40.3	37.6	38.1	38.6	39.1	40.5	
	39.0	39.4	40.0	40.5	41.8	39.2	39.6	40.2	40.7	42.0	
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, 950.0 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -0.2)  
Area: 0.001 m2

C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: HIGH  
Temperature:25.3°C  
Operators:  
Test Date:20 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: 99LED834WW	TYPE:	WEIGHT: 1
SPEC.:	DIM.: F60	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: round	Shielding Angle:

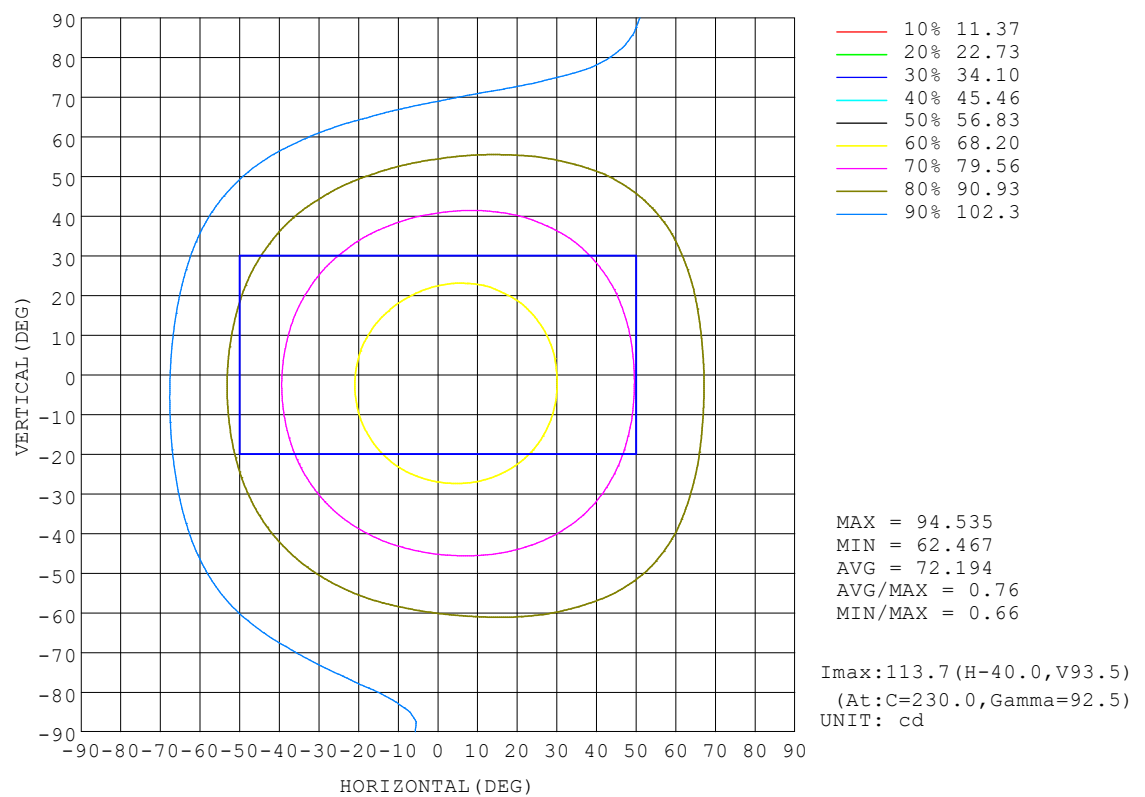
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	41	26	18	39	25	17	35	23	16	8
0.80	51	35	25	48	33	24	42	30	22	11
1.00	59	42	32	55	40	30	48	38	27	14
1.25	67	50	39	62	47	37	54	42	33	17
1.50	73	57	45	68	53	43	58	46	38	20
2.00	82	67	55	76	62	52	65	54	46	25
2.50	88	74	63	81	69	59	69	59	51	28
3.00	93	80	69	86	74	65	72	63	56	31
4.00	99	87	78	91	81	73	77	69	63	35
5.00	103	93	84	95	86	79	80	73	67	38
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: 20 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: 99LED834WW	TYPE:	WEIGHT: 1
SPEC.:	DIM.: F60	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: round	Shielding Angle:



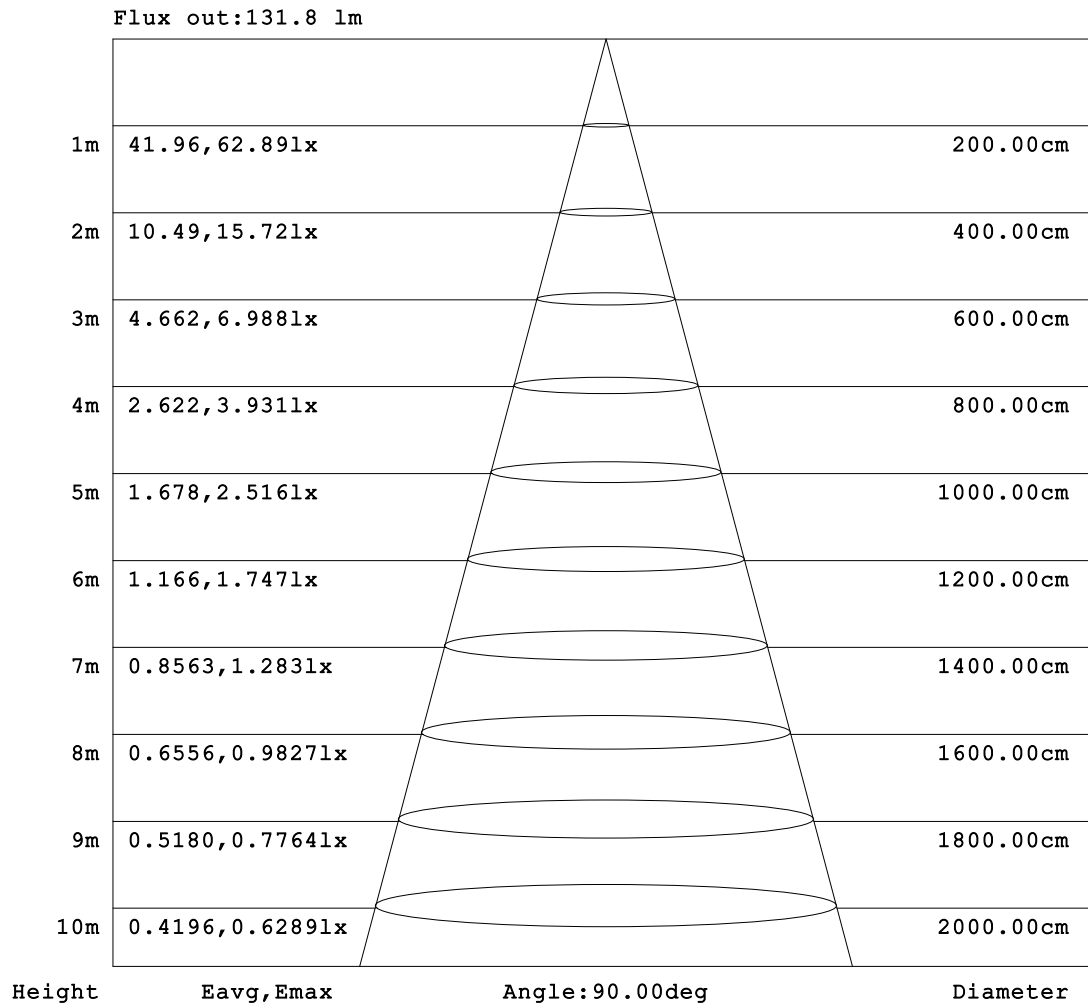
C Range: 0 - 360DEG  
 C Interval: 10.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3°C  
 Operators:  
 Test Date: 20 October 2022

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: 99LED834WW	TYPE:	WEIGHT: 1
SPEC.:	DIM.: F60	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: round	Shielding Angle:



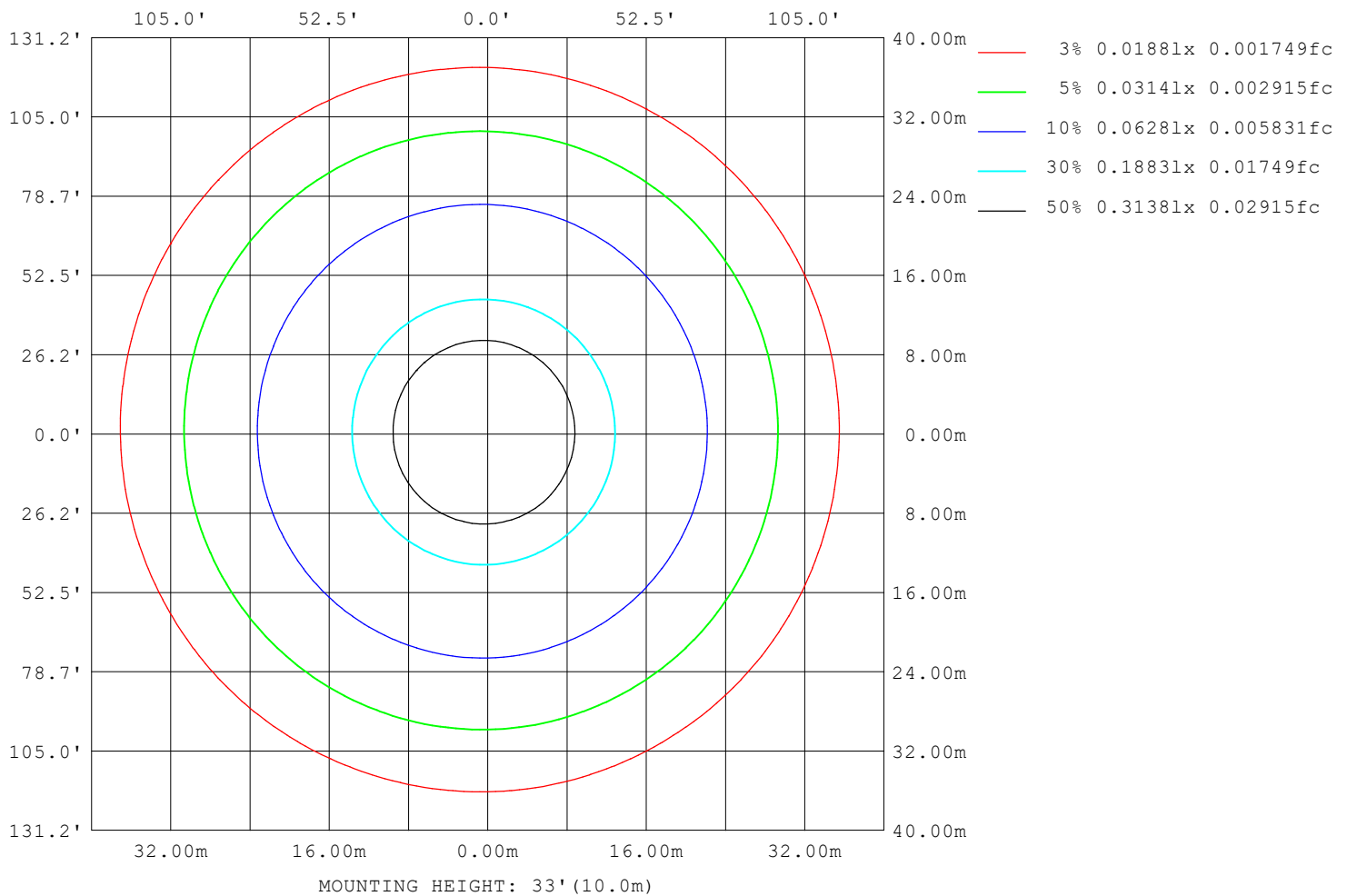
**Note:** The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
 C Interval: 10.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3°C  
 Operators:  
 Test Date: 20 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: 99LED834WW	TYPE:	WEIGHT: 1
SPEC.:	DIM.: F60	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: 20 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: 99LED834WW	TYPE:	WEIGHT: 1
SPEC.:	DIM.: F60	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: round	Shielding Angle:

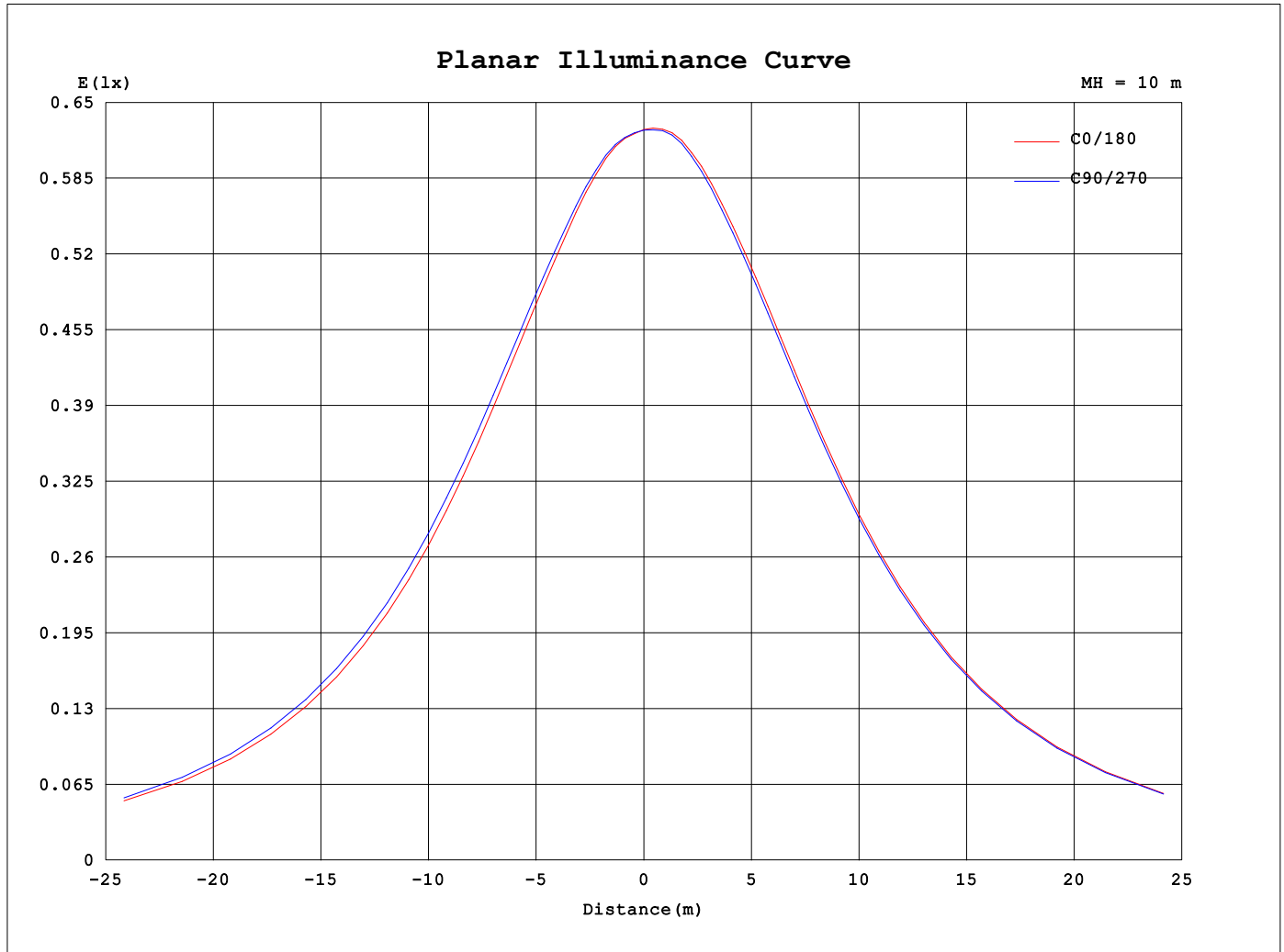
AvgL	cd/m2
L_0~180 (65) av	224975
L_0~180 (75) av	388545
L_0~180 (85) av	1188957
L_90~270 (65) av	229222
L_90~270 (75) av	396358
L_90~270 (85) av	1212411
L_45 (65) av	227506
L_45 (75) av	393470
L_45 (85) av	1204067

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: HIGH  
Temperature:25.3°C  
Operators:  
Test Date:20 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: 20 October 2022

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  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: 99LED834WW	TYPE:	WEIGHT: 1
SPEC.:	DIM.: F60	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	62.7	62.7	62.7	62.7	62.7	62.7	62.7	62.7	62.7	62.7	62.7	62.7	62.7	62.7	62.7	62.7	62.7	62.7	62.7
5	62.6	62.6	62.5	62.5	62.5	62.5	62.5	62.6	62.7	62.7	62.8	62.9	63.0	63.1	63.2	63.2	63.3	63.4	63.4
10	63.0	62.9	62.9	62.8	62.8	62.9	62.9	63.0	63.1	63.3	63.5	63.6	63.8	64.0	64.1	64.3	64.4	64.5	64.6
15	63.6	63.5	63.4	63.3	63.4	63.5	63.6	63.7	63.9	64.1	64.4	64.6	64.9	65.1	65.4	65.5	65.8	65.9	66.0
20	64.5	64.4	64.3	64.3	64.4	64.5	64.6	64.8	65.1	65.3	65.7	66.0	66.3	66.6	66.9	67.2	67.5	67.7	67.8
25	66.0	65.9	65.9	65.9	65.9	66.1	66.3	66.6	66.9	67.2	67.6	68.0	68.4	68.7	69.1	69.4	69.8	70.0	70.2
30	68.2	68.0	68.0	68.0	68.1	68.3	68.6	68.9	69.3	69.7	70.1	70.5	71.0	71.4	71.9	72.3	72.7	72.9	73.1
35	70.6	70.4	70.4	70.4	70.6	70.9	71.2	71.6	72.0	72.5	73.1	73.5	74.0	74.5	75.0	75.4	75.9	76.2	76.4
40	73.3	73.1	73.1	73.2	73.5	73.8	74.2	74.7	75.2	75.8	76.4	76.9	77.4	77.9	78.5	78.9	79.4	79.7	80.0
45	76.4	76.2	76.2	76.4	76.7	77.1	77.5	78.1	78.7	79.3	80.0	80.5	81.2	81.7	82.3	82.8	83.3	83.6	83.9
50	79.8	79.6	79.7	79.9	80.2	80.7	81.2	81.8	82.5	83.2	83.9	84.5	85.2	85.8	86.5	86.9	87.5	87.9	88.2
55	83.3	83.1	83.1	83.3	83.8	84.3	84.8	85.5	86.3	87.1	87.8	88.5	89.2	89.9	90.6	91.1	91.6	92.1	92.5
60	86.6	86.4	86.5	86.8	87.2	87.8	88.4	89.1	90.0	90.8	91.6	92.3	93.1	93.8	94.6	95.1	95.6	96.2	96.6
65	89.7	89.5	89.6	89.9	90.4	91.0	91.6	92.4	93.3	94.2	95.0	95.7	96.6	97.4	98.2	98.8	99.4	99.9	100
70	92.4	92.2	92.3	92.6	93.1	93.7	94.3	95.1	96.1	97.0	97.9	98.7	99.6	101	101	102	103	103	104
75	94.5	94.3	94.4	94.7	95.3	95.9	96.4	97.3	98.3	99.3	100	101	102	103	104	105	105	106	107
80	96.1	95.9	95.9	96.3	96.9	97.4	97.9	98.9	99.8	101	102	103	104	105	106	106	107	108	109
85	97.2	96.8	96.8	97.2	97.7	98.2	98.8	99.7	101	102	103	104	105	106	107	108	108	109	110
90	97.5	97.1	97.1	97.5	97.9	98.3	98.9	99.8	101	102	103	104	105	106	107	108	109	110	111
95	97.3	96.8	96.8	97.1	97.5	97.9	98.4	99.3	100	101	102	103	105	106	107	108	109	110	111
100	96.4	95.9	95.8	96.1	96.4	96.7	97.2	98.0	99.0	100.0	101	102	103	105	106	107	108	109	110
105	94.8	94.2	94.1	94.3	94.5	94.8	95.2	96.0	96.9	98.0	99.0	100	101	103	104	105	106	107	108
110	92.5	92.0	91.7	91.8	92.0	92.3	92.7	93.4	94.2	95.3	96.3	97.6	98.7	100.0	101	102	103	105	106
115	89.7	89.1	88.8	88.8	88.9	89.2	89.6	90.2	91.0	92.0	93.0	94.3	95.4	96.7	97.8	98.9	100	101	102
120	86.4	85.8	85.4	85.4	85.4	85.6	85.9	86.6	87.2	88.2	89.2	90.4	91.5	92.7	93.9	95.1	96.2	97.5	98.6
125	82.6	82.0	81.5	81.4	81.4	81.6	81.9	82.4	83.1	84.0	84.9	86.0	87.2	88.3	89.5	90.7	91.8	93.0	94.2
130	78.2	77.6	77.2	77.0	77.0	77.2	77.4	77.9	78.4	79.3	80.1	81.2	82.3	83.5	84.6	85.8	86.9	88.1	89.2
135	73.4	72.8	72.3	72.2	72.1	72.3	72.5	72.9	73.4	74.2	75.0	76.1	77.1	78.2	79.3	80.4	81.5	82.7	83.7
140	68.2	67.6	67.1	67.0	66.9	67.0	67.3	67.8	68.2	69.1	69.6	70.6	71.5	72.6	73.6	74.7	75.7	76.8	77.8
145	63.1	62.5	62.0	61.8	61.7	61.8	61.9	62.4	62.8	63.5	64.1	65.0	65.9	66.9	67.8	68.9	69.9	70.8	71.7
150	56.9	56.2	56.0	56.0	55.7	55.5	55.9	56.5	56.9	57.6	58.1	59.0	59.7	60.7	61.6	62.6	63.4	64.3	65.1
155	47.3	47.0	47.4	47.4	46.6	45.9	47.0	48.5	49.0	49.6	50.1	50.9	51.6	52.5	53.3	54.2	54.9	55.8	56.5
160	35.3	35.0	35.1	34.9	33.8	33.5	35.6	37.5	38.8	39.4	39.9	40.6	41.2	42.0	42.7	43.5	44.1	44.9	45.5
165	21.5	20.4	19.6	19.3	18.9	19.8	22.8	24.5	25.7	26.5	26.8	27.6	28.2	28.9	29.0	29.7	30.2	30.9	31.3
170	8.66	7.38	6.26	5.84	6.27	7.77	8.79	9.80	10.3	11.0	11.2	12.1	12.3	12.8	12.8	13.0	13.0	13.4	13.7
175	0.83	0.81	0.84	0.81	0.84	0.81	0.85	0.82	0.86	0.82	0.86	0.83	0.86	0.83	0.87	0.83	0.86	0.82	0.82
180	0.81	0.81	0.81	0.81	0.82	0.81	0.82	0.82	0.82	0.82	0.82	0.82	0.83	0.82	0.83	0.82	0.83	0.82	0.81

C Range: 0 - 360DEG

C Interval: 10.0DEG

Test Speed: HIGH

Temperature:25.3°C

Operators:

Test Date:20 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: 99LED834WW	TYPE:	WEIGHT: 1
SPEC.:	DIM.: F60	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	62.7	62.7	62.7	62.7	62.7	62.7	62.7	62.7	62.7	62.7	62.7	62.7	62.7	62.7	62.7	62.7	62.7		
5	63.5	63.5	63.5	63.5	63.6	63.5	63.5	63.4	63.3	63.2	63.1	63.0	62.9	62.9	62.8	62.7	62.6		
10	64.7	64.8	64.8	64.8	64.8	64.7	64.7	64.5	64.4	64.2	64.0	63.8	63.6	63.4	63.3	63.2	63.1		
15	66.2	66.2	66.3	66.3	66.3	66.1	66.0	65.8	65.6	65.3	65.0	64.8	64.5	64.2	64.0	63.8	63.7		
20	68.0	68.1	68.1	68.1	68.1	67.9	67.8	67.5	67.2	66.9	66.5	66.1	65.8	65.5	65.1	64.9	64.7		
25	70.4	70.5	70.6	70.6	70.5	70.3	70.1	69.8	69.5	69.0	68.6	68.1	67.7	67.2	66.9	66.5	66.3		
30	73.4	73.5	73.6	73.6	73.6	73.3	73.1	72.7	72.3	71.7	71.2	70.6	70.1	69.5	69.1	68.7	68.4		
35	76.7	76.9	77.1	77.0	77.0	76.7	76.5	76.0	75.5	74.8	74.2	73.5	72.8	72.2	71.7	71.2	70.8		
40	80.4	80.6	80.8	80.8	80.8	80.5	80.1	79.6	79.0	78.2	77.5	76.7	75.9	75.2	74.6	74.0	73.6		
45	84.4	84.6	84.9	84.9	84.9	84.6	84.2	83.6	82.9	82.0	81.2	80.2	79.4	78.6	77.9	77.2	76.7		
50	88.7	89.0	89.3	89.4	89.4	89.0	88.7	88.0	87.2	86.2	85.2	84.1	83.2	82.2	81.4	80.7	80.2		
55	93.0	93.4	93.8	93.9	93.9	93.5	93.1	92.3	91.4	90.4	89.3	88.1	87.0	86.0	85.1	84.3	83.7		
60	97.2	97.7	98.1	98.2	98.3	97.9	97.5	96.6	95.6	94.5	93.3	92.0	90.8	89.7	88.6	87.7	87.0		
65	101	102	102	102	102	102	101	101	99.6	98.3	97.0	95.6	94.4	93.1	92.0	90.9	90.2		
70	105	105	106	106	106	106	105	104	103	102	100	98.9	97.5	96.1	94.9	93.8	92.9		
75	107	108	109	109	109	109	108	107	106	105	103	102	100	98.6	97.3	96.1	95.1		
80	109	110	111	111	111	111	110	109	108	107	105	104	102	101	99.1	97.8	96.8		
85	111	112	112	113	113	112	112	111	110	108	107	105	103	102	100	99.0	97.9		
90	112	112	113	113	114	113	113	112	111	109	108	106	104	103	101	99.5	98.3		
95	112	112	113	113	114	113	113	112	111	109	108	106	104	102	101	99.4	98.1		
100	111	112	112	113	113	112	112	111	110	108	107	105	103	102	100	98.6	97.3		
105	109	110	111	111	111	111	110	109	108	107	105	104	102	100	98.5	97.0	95.7		
110	107	108	108	109	109	108	108	107	106	105	103	102	99.7	98.0	96.3	94.9	93.5		
115	103	104	105	105	106	105	105	104	103	102	100	98.7	96.9	95.3	93.5	92.1	90.8		
120	99.6	101	101	102	102	101	101	100	99.3	98.2	96.7	95.2	93.5	91.9	90.2	88.8	87.4		
125	95.1	96.1	96.7	97.1	97.1	96.9	96.5	95.9	95.0	93.9	92.5	91.1	89.4	87.9	86.3	84.9	83.6		
130	90.1	91.0	91.6	92.0	92.0	91.9	91.4	90.9	90.0	89.1	87.7	86.4	84.8	83.4	81.8	80.5	79.3		
135	84.6	85.4	86.0	86.3	86.4	86.3	85.9	85.4	84.6	83.7	82.4	81.2	79.7	78.4	76.9	75.6	74.4		
140	78.6	79.4	79.9	80.2	80.3	80.2	79.8	79.4	78.7	77.8	76.7	75.5	74.2	72.9	71.5	70.3	69.2		
145	72.4	73.2	73.6	74.0	74.0	74.0	73.6	73.3	72.6	71.8	70.7	69.7	68.5	67.4	66.1	65.1	64.0		
150	65.7	66.4	66.8	67.1	67.1	67.1	66.8	66.4	65.8	65.1	64.1	63.3	62.1	61.1	60.0	59.0	58.0		
155	57.1	57.7	57.9	58.2	58.1	58.0	57.6	57.3	56.7	56.2	55.3	54.6	53.5	52.6	51.5	50.6	49.4		
160	45.9	46.4	46.5	46.8	46.7	46.6	46.2	46.0	45.5	45.1	44.2	43.5	42.5	41.8	40.8	40.0	38.0		
165	31.5	31.8	31.8	31.8	31.6	31.9	31.5	31.3	30.6	30.3	29.6	29.2	28.4	28.0	27.1	26.1	24.0		
170	13.7	14.1	14.1	14.5	14.6	14.8	14.5	14.4	13.6	13.3	12.7	12.6	12.0	11.8	11.3	11.0	10.2		
175	0.85	0.82	0.87	0.82	0.87	0.82	0.87	0.82	0.87	0.82	0.86	0.82	0.86	0.83	0.86	0.83	0.85		
180	0.81	0.81	0.82	0.81	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.83	0.83	0.82	0.82		

C Range: 0 - 360DEG

C Interval: 10.0DEG

Test Speed: HIGH

Temperature:25.3°C

Operators:

Test Date:20 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: