

# Floodlight Summary:

Report based on lamp delivering 1000 lumens.

Maximum Intensity	278.0 cd per klm.
(Luminaire orientation as tested.)	-3.0 degrees vertical
	30.0 degrees horizontal

Beam Spread	At 10% of Imax	232.8V x 180.0H
	At 50% of Imax	136.1V x 126.1H
	At 90% of Imax	58.1V x 51.5H

Beam Flux	Total	1182.9 lumens per klm.
	To 10% of Imax	1150.1 lumens per klm.
	To 50% of Imax	757.3 lumens per klm.
	To 90% of Imax	165.7 lumens per klm.

Upward LOR	21.9 %
Downward LOR	96.3 %

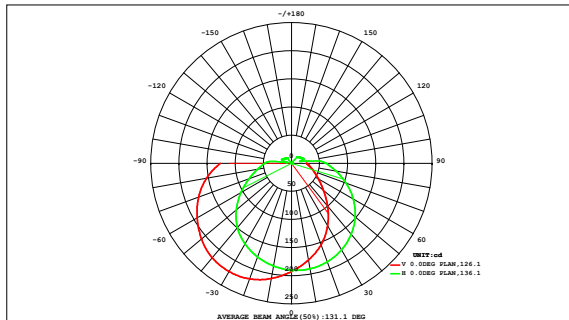
Luminaire Efficiency (Light Output Ratio)	118.3 %
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C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature: 25.3°C  
Operators:  
Test Date: 11 November 2022

γ Range: 0 - 140DEG  
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:

## LUMINAIRE PHOTOMETRIC TEST REPORT

NAME: 93M20TLB1030/BL	TYPE:	WEIGHT: 1
SPEC.:	DIM.: F100	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: sphere	Shielding Angle:



DATA OF LAMP		PHOTOMETRIC DATA	
MODEL	93M20TLB1030/BL	Imax (cd)	222.4
NOMINAL POWER (W)	10	AVAILABILITY (%)	115.0
RATED VOLTAGE (V)	48	Avai. FLUX (lm)	920.0
NOMINAL FLUX (lm)	800	LOR (%)	118.3
LAMPS INSIDE	1	TOTAL FLUX (lm)	946.3
TEST VOLTAGE (V)	48	θ @50% (H,V)	126,136DEG

VERTICAL (DEG)	AREA FLUX DIAGRAM																UNIT:lm		Φ t	Φ a
	0.07	0.21	0.36	0.52	0.70	0.89	1.10	1.31	1.54	1.76	1.96	2.11	2.17	2.10	1.87	1.48	0.96	0.33	21.4	21.4
90	0.07	0.21	0.36	0.52	0.70	0.89	1.10	1.31	1.54	1.76	1.96	2.11	2.17	2.10	1.87	1.48	0.96	0.33	21.4	21.4
80	0.07	0.23	0.40	0.60	0.82	1.06	1.34	1.64	1.97	2.29	2.54	2.69	2.69	2.51	2.15	1.64	1.02	0.34	26.0	26.0
70	0.07	0.24	0.44	0.67	0.95	1.28	1.66	2.10	2.57	2.98	3.26	3.36	3.26	2.94	2.43	1.79	1.07	0.35	31.4	31.4
60	0.08	0.25	0.48	0.75	1.10	1.53	2.07	2.67	3.26	3.74	4.00	4.02	3.79	3.33	2.69	1.94	1.13	0.36	37.2	37.2
50	0.08	0.27	0.51	0.84	1.27	1.83	2.53	3.28	3.95	4.44	4.65	4.59	4.25	3.67	2.92	2.06	1.18	0.36	42.7	42.7
40	0.08	0.28	0.55	0.92	1.44	2.14	2.98	3.83	4.53	4.99	5.16	5.04	4.62	3.96	3.11	2.17	1.22	0.37	47.4	47.4
30	0.08	0.29	0.58	1.00	1.61	2.43	3.37	4.26	4.96	5.41	5.57	5.42	4.95	4.20	3.27	2.25	1.25	0.38	51.3	51.3
20	0.08	0.29	0.61	1.07	1.75	2.65	3.66	4.57	5.26	5.71	5.90	5.75	5.22	4.40	3.39	2.32	1.28	0.38	54.3	54.3
10	0.08	0.30	0.62	1.11	1.84	2.80	3.84	4.77	5.47	5.92	6.14	5.97	5.42	4.55	3.48	2.36	1.30	0.38	56.4	56.4
0	0.08	0.30	0.62	1.12	1.86	2.83	3.87	4.80	5.51	6.05	6.28	6.09	5.52	4.63	3.53	2.39	1.31	0.38	57.2	57.2
-10	0.08	0.30	0.61	1.10	1.83	2.79	3.83	4.75	5.47	5.96	6.18	6.01	5.44	4.57	3.49	2.37	1.30	0.38	56.4	56.4
-20	0.08	0.29	0.60	1.06	1.74	2.65	3.66	4.58	5.29	5.74	5.93	5.77	5.24	4.41	3.40	2.32	1.29	0.38	54.4	54.4
-30	0.08	0.28	0.58	1.00	1.61	2.44	3.38	4.27	4.97	5.40	5.56	5.40	4.93	4.18	3.26	2.26	1.26	0.38	51.2	51.2
-40	0.08	0.28	0.55	0.92	1.44	2.15	2.99	3.83	4.52	4.95	5.11	4.98	4.56	3.91	3.09	2.17	1.23	0.37	47.1	47.1
-50	0.08	0.26	0.51	0.84	1.27	1.84	2.54	3.28	3.93	4.38	4.57	4.49	4.16	3.61	2.89	2.06	1.18	0.37	42.3	42.3
-60	0.07	0.25	0.47	0.75	1.10	1.54	2.08	2.68	3.25	3.70	3.93	3.94	3.71	3.27	2.66	1.93	1.13	0.36	36.8	36.8
-70	0.07	0.24	0.44	0.67	0.95	1.28	1.67	2.11	2.57	2.97	3.23	3.31	3.20	2.89	2.41	1.79	1.08	0.35	31.2	31.2
-80	0.07	0.22	0.40	0.59	0.82	1.07	1.34	1.65	1.98	2.29	2.54	2.68	2.66	2.48	2.14	1.64	1.02	0.34	25.9	25.9
-90	0.07	0.22	0.40	0.59	0.82	1.07	1.34	1.65	1.98	2.29	2.54	2.68	2.66	2.48	2.14	1.64	1.02	0.34	25.9	25.9
	-90	-80	-70	-60	-50	-40	-30	-20	HORIZONTAL (DEG)	20	30	40	50	60	70	80	90			
Φ t	1.39	4.78	9.33	15.5	24.1	35.2	47.9	60.4	71.0	78.7	82.5	81.6	75.8	65.6	52.2	36.9	21.2	6.56	771	---
Φ a	1.39	4.78	9.33	15.5	24.1	35.2	47.9	60.4	71.0	78.7	82.5	81.6	75.8	65.6	52.2	36.9	21.2	6.56	---	771

one-half-peak spread: U:68.4,D:63.6 , L:66.5,R:65.8

NEMA Beam Type: Type 7

C Range: 0 - 360DEG

C Interval: 5.0DEG

Test Speed: HIGH

Temperature:25.3°C

Operators:

Test Date:11 November 2022

γ Range: 0 - 140DEG

γ Interval: 2.5DEG

Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.456

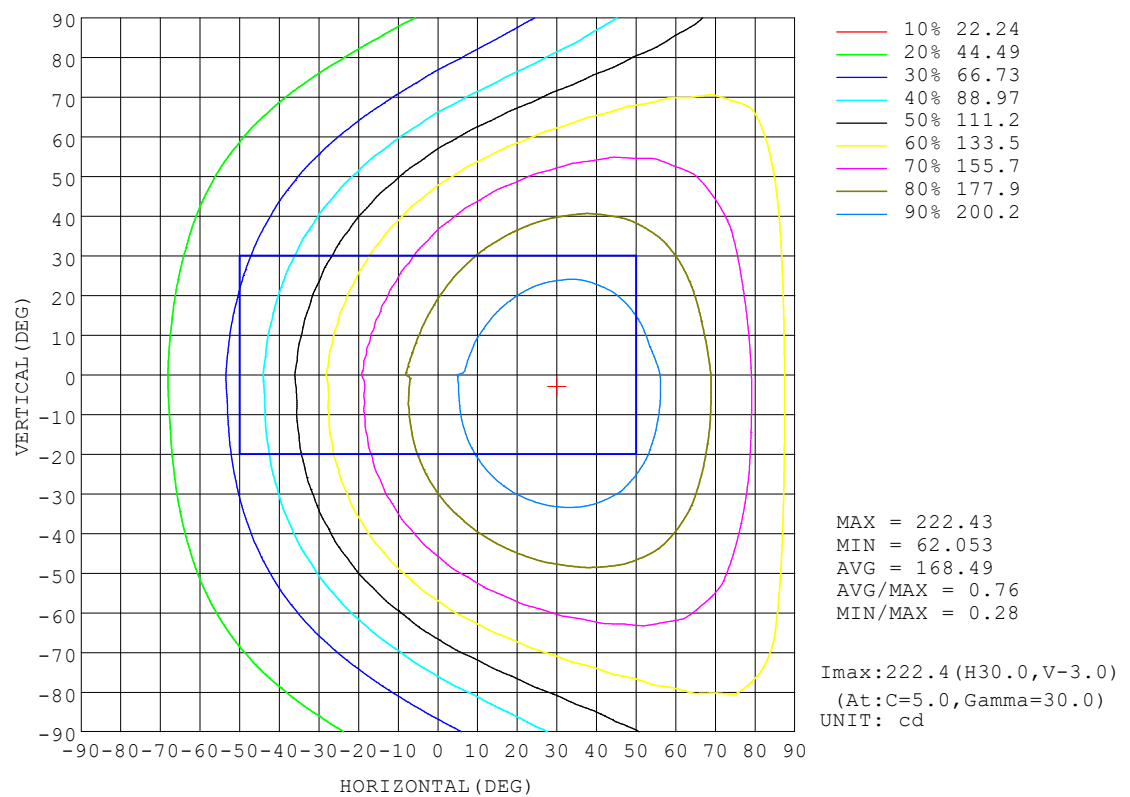
Humidity:65.0%

Test Distance:6.265m [K=1.0000]

Remarks:

# ISOCANDELA DIAGRAM

NAME: 93M20TLB1030/BL	TYPE:	WEIGHT: 1
SPEC.:	DIM.: F100	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: sphere	Shielding Angle:

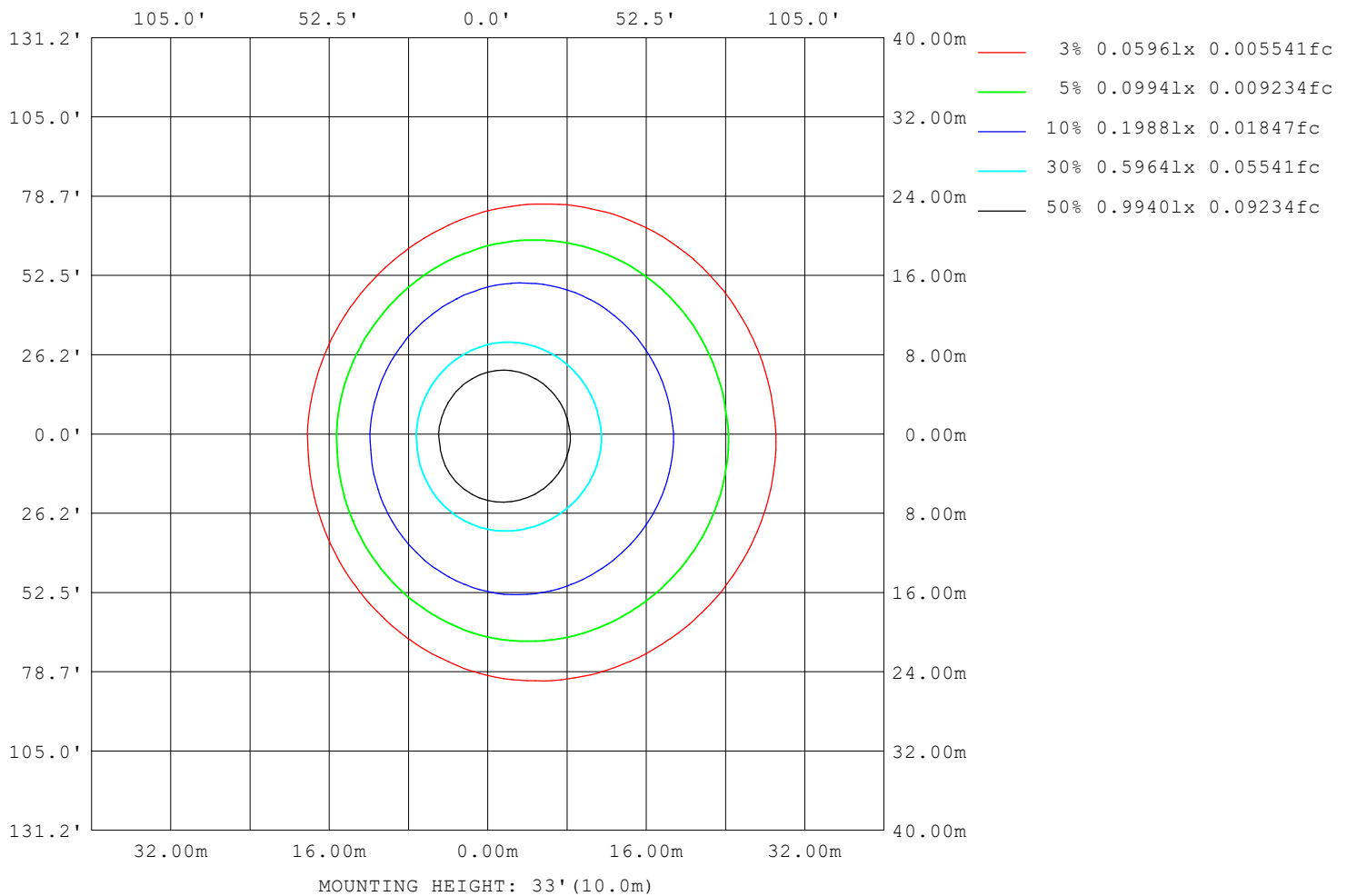


C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature:25.3°C  
Operators:  
Test Date:11 November 2022

$\gamma$  Range: 0 - 140DEG  
 $\gamma$  Interval: 2.5DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.456  
Humidity:65.0%  
Test Distance:6.265m [K=1.0000]  
Remarks:

**ISOLUX DIAGRAM**

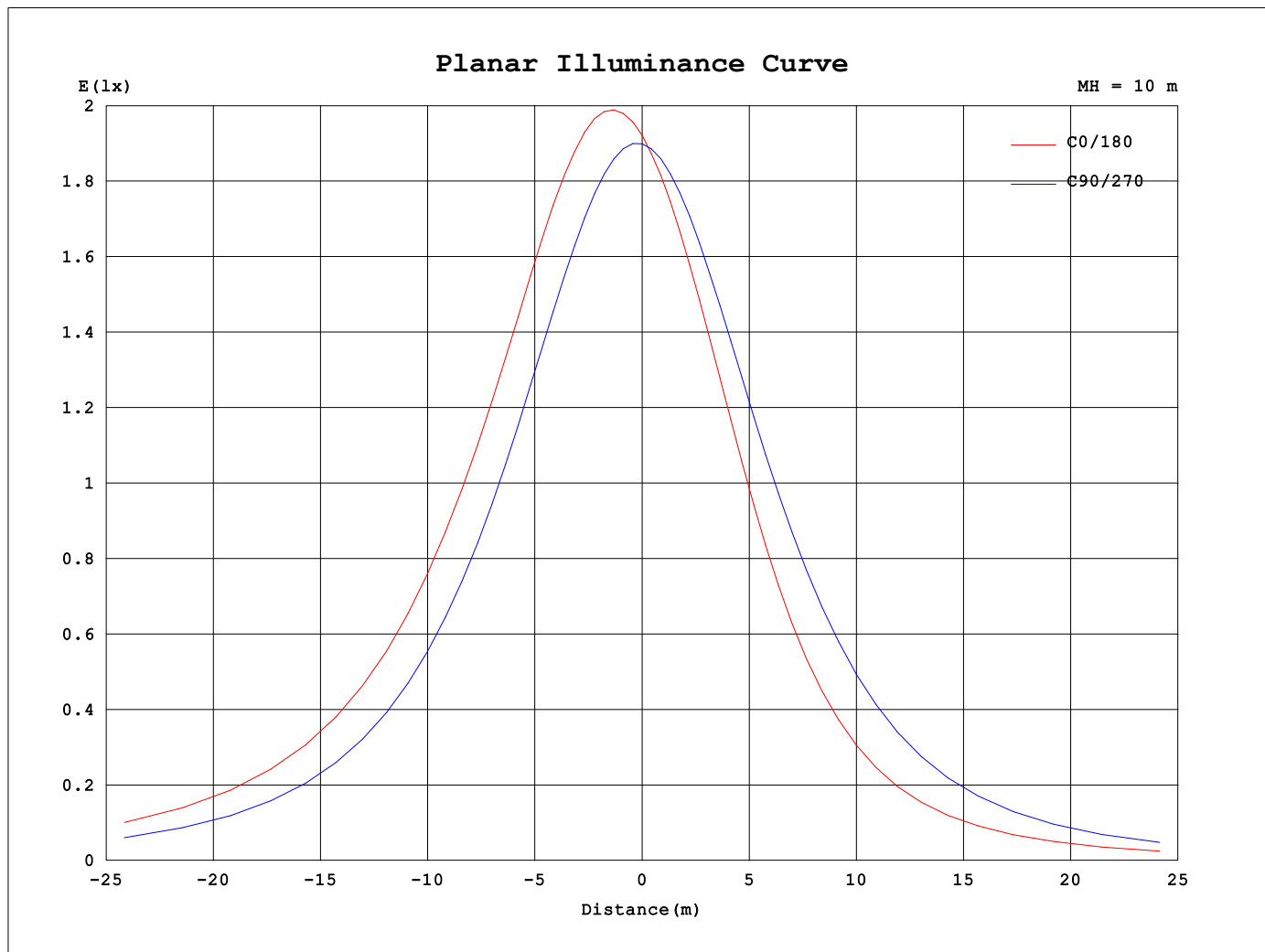
NAME: 93M20TLB1030/BL	TYPE:	WEIGHT: 1
SPEC.:	DIM.: F100	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: sphere	Shielding Angle:



C Range: 0 - 360DEG  
 C Interval: 5.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3°C  
 Operators:  
 Test Date: 11 November 2022

γ Range: 0 - 140DEG  
 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

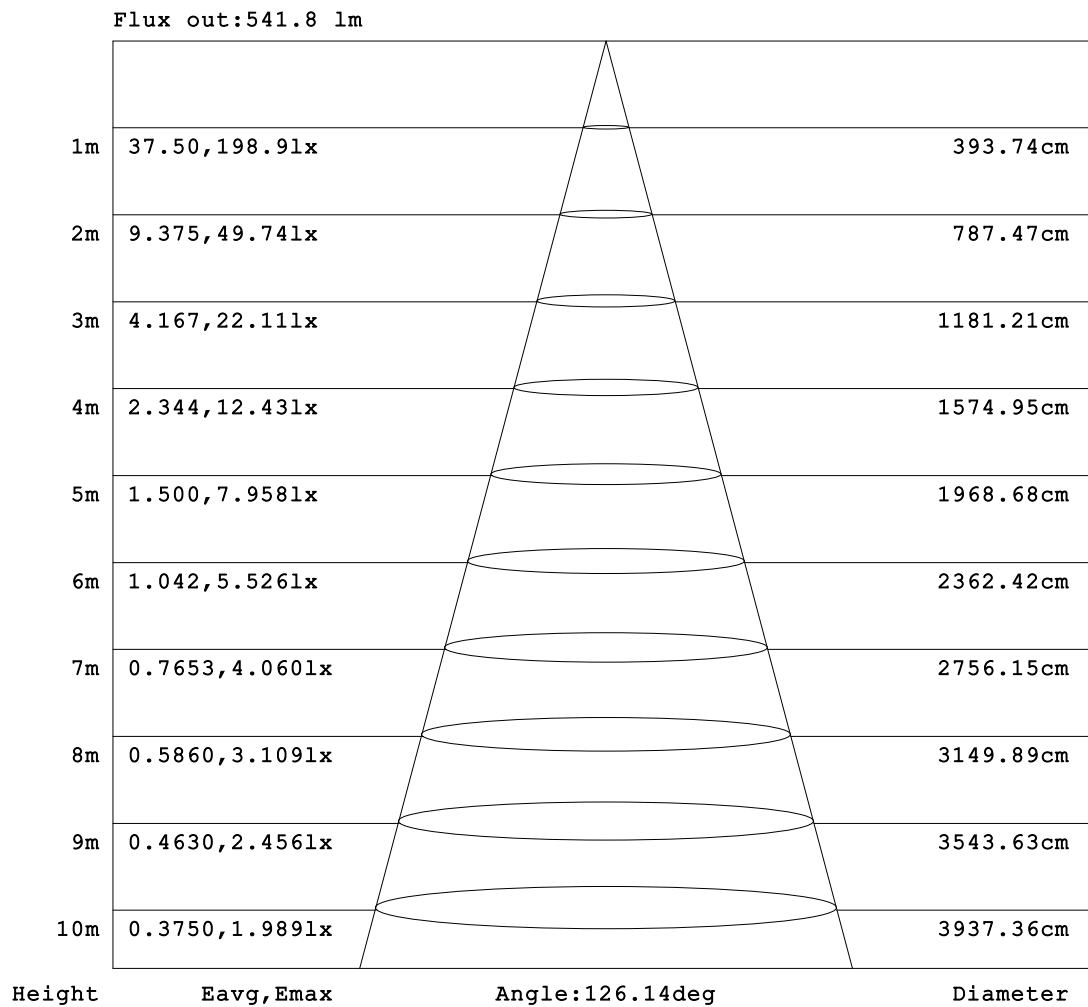


C Range: 0 - 360DEG  
 C Interval: 5.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3°C  
 Operators:  
 Test Date: 11 November 2022

$\gamma$  Range: 0 - 140DEG  
 $\gamma$  Interval: 2.5DEG  
 Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.00.456  
 Humidity: 65.0%  
 Test Distance: 6.265m [K=1.0000]  
 Remarks:

**AAI Figure**

NAME: 93M20TLB1030/BL	TYPE:	WEIGHT: 1
SPEC.:	DIM.: F100	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: sphere	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: 5.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3°C  
 Operators:  
 Test Date: 11 November 2022

γ Range: 0 - 140DEG  
 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: 93M20TLB1030/BL	TYPE:	WEIGHT: 1
SPEC.:	DIM.: F100	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: sphere	Shielding Angle:

Table--1

UNIT: cd

H (DEG) V (DEG)	-90	-85	-80	-75	-70	-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0
-180	26.1	23.0	20.1	17.5	15.1	12.8	10.8	8.99	7.36	5.93	4.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-170	26.1	23.1	20.3	17.7	15.4	13.2	11.3	9.61	8.11	6.82	5.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-160	26.1	23.2	20.6	18.2	16.0	14.1	12.4	10.9	9.62	8.49	7.50	5.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-150	26.1	23.5	21.1	19.0	17.0	15.4	14.0	12.7	11.7	10.8	9.93	9.08	8.22	2.49	0.00	0.00	0.00	0.00	0.00
-140	26.1	23.8	21.8	20.0	18.4	17.1	15.9	15.1	14.3	13.7	13.0	12.3	11.4	10.4	9.22	7.81	7.13	10.5	14.6
-130	26.1	24.2	22.6	21.2	20.1	19.1	18.3	17.8	17.4	17.1	16.8	16.4	15.7	14.7	13.3	11.5	9.82	11.9	17.0
-120	26.1	24.6	23.5	22.6	21.9	21.4	21.0	20.8	20.9	21.0	21.3	21.4	21.2	20.6	19.2	16.9	13.7	13.5	19.9
-110	26.1	25.2	24.6	24.1	23.9	23.9	24.0	24.2	24.7	25.3	26.1	26.9	27.6	28.0	27.6	25.7	21.6	15.1	22.4
-100	26.1	25.7	25.7	25.8	26.1	26.5	27.1	27.9	28.8	29.9	31.1	32.6	34.2	35.9	37.5	38.5	36.8	27.8	23.2
-90	26.1	26.3	26.8	27.5	28.3	29.3	30.5	31.8	33.3	35.0	36.8	39.0	41.2	43.8	46.6	49.9	53.3	57.1	61.2
-80	26.1	26.8	27.9	29.2	30.6	32.3	34.0	36.1	38.2	40.7	43.4	46.6	50.0	54.0	58.3	63.2	68.4	74.3	80.4
-70	26.1	27.4	29.0	30.9	32.9	35.2	37.7	40.5	43.7	47.3	51.3	56.0	61.2	67.2	73.8	80.9	88.0	96.1	103
-60	26.1	27.9	30.0	32.4	35.1	38.1	41.4	45.2	49.6	54.6	60.5	67.3	75.0	83.4	92.2	101	110	119	127
-50	26.1	28.4	31.0	33.9	37.1	40.8	45.1	50.0	55.8	62.6	70.7	79.9	90.0	100	111	121	131	140	148
-40	26.1	28.8	31.7	35.1	38.9	43.3	48.3	54.6	61.9	70.7	80.9	92.1	104	116	128	139	149	157	165
-30	26.1	29.1	32.4	36.1	40.3	45.4	51.3	58.4	67.3	77.7	89.4	103	115	128	141	152	161	170	178
-20	26.1	29.4	32.9	36.8	41.4	46.8	53.3	61.4	71.2	82.8	95.6	110	123	137	149	160	169	178	186
-10	26.1	29.5	33.2	37.4	42.1	47.6	54.4	62.9	73.2	85.3	98.6	113	127	140	153	163	173	182	190
0	26.1	29.6	33.3	37.6	42.4	48.1	55.1	63.7	74.2	86.5	100	114	128	142	154	165	175	184	192
10	26.1	29.5	33.1	37.2	41.8	47.3	53.9	62.0	71.8	83.4	96.2	110	123	137	148	159	169	178	185
20	26.1	29.3	32.7	36.4	40.8	45.8	51.7	58.8	67.5	77.9	89.6	102	115	128	140	151	161	169	177
30	26.1	29.0	32.0	35.5	39.3	43.7	48.7	54.8	62.1	70.6	80.7	91.4	104	115	127	138	149	158	166
40	26.1	28.6	31.2	34.2	37.4	41.1	45.3	50.1	55.9	62.6	70.5	79.6	89.5	99.8	111	121	131	141	150
50	26.1	28.1	30.3	32.7	35.3	38.4	41.6	45.4	49.7	54.6	60.4	67.0	74.6	83.1	91.6	101	110	119	128
60	26.1	27.6	29.3	31.1	33.1	35.4	37.9	40.7	43.8	47.3	51.2	55.9	61.0	66.9	73.4	80.6	88.2	95.6	104
70	26.1	27.1	28.2	29.4	30.9	32.4	34.2	36.2	38.4	40.8	43.5	46.6	49.9	53.7	58.1	62.8	68.1	73.9	80.5
80	26.1	26.5	27.0	27.7	28.5	29.5	30.6	31.9	33.4	35.0	36.9	38.9	41.2	43.7	46.5	49.5	53.0	56.8	61.3
90	26.1	25.9	25.9	25.9	26.2	26.6	27.2	27.9	28.9	29.9	31.2	32.5	34.1	35.8	37.8	39.9	42.4	44.8	47.7
100	26.1	25.4	24.8	24.3	24.1	23.9	24.0	24.3	24.7	25.3	26.1	27.0	28.1	29.4	30.7	31.6	30.8	24.1	9.21
110	26.1	24.8	23.7	22.8	22.0	21.5	21.1	20.9	20.9	21.1	21.5	22.0	22.6	22.9	22.8	21.4	18.2	12.7	19.3
120	26.1	24.3	22.8	21.4	20.2	19.2	18.4	17.8	17.4	17.3	17.2	17.3	17.2	16.7	15.7	13.9	11.3	11.2	16.6
130	26.1	23.9	21.9	20.1	18.5	17.2	16.0	15.1	14.4	13.9	13.5	13.1	12.5	11.7	10.6	9.17	7.78	9.78	14.1
140	26.1	23.6	21.2	19.1	17.2	15.5	14.0	12.8	11.8	11.0	10.3	9.61	8.89	8.07	7.14	6.06	5.60	8.73	12.2
150	26.1	23.3	20.7	18.3	16.2	14.2	12.5	11.0	9.70	8.62	7.72	6.90	6.16	1.88	0.00	0.00	0.00	0.00	0.00
160	26.1	23.1	20.3	17.7	15.4	13.3	11.4	9.66	8.17	6.92	5.84	4.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00
170	26.1	23.0	20.1	17.5	15.0	12.8	10.8	8.99	7.38	5.96	4.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
180	26.1	23.0	20.1	17.5	15.1	12.8	10.8	8.99	7.36	5.93	4.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

C Range: 0 - 360DEG

C Interval: 5.0DEG

Test Speed: HIGH

Temperature:25.3°C

Operators:

Test Date:11 November 2022

γ Range: 0 - 140DEG

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: 93M20TLB1030/BL	TYPE:	WEIGHT: 1
SPEC.:	DIM.: F100	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: sphere	Shielding Angle:

Table--2

UNIT: cd

H (DEG) V (DEG)	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	
-180	0.00	0.00	0.00	0.00	0.00	0.00	0.00	32.4	36.5	41.2	46.6	53.2	61.3	71.3	83.3	96.6	111	126	
-170	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.4	37.5	42.2	47.7	54.4	62.6	72.6	84.4	97.6	112	126	
-160	0.00	0.00	0.00	0.00	0.00	0.00	27.7	35.4	39.5	44.3	49.9	56.6	64.9	74.9	86.6	99.3	113	126	
-150	0.00	0.00	0.00	0.00	9.18	31.2	34.7	38.4	42.6	47.5	53.3	60.3	68.6	78.4	89.4	102	114	126	
-140	17.2	20.8	24.6	28.3	31.9	35.4	38.9	42.7	47.1	52.2	58.3	65.4	73.8	83.3	93.3	105	116	126	
-130	20.1	24.6	29.3	33.6	37.4	41.0	44.5	48.6	53.3	58.8	65.1	72.5	80.5	89.6	98.6	108	118	126	
-120	23.8	30.4	36.3	41.0	44.8	48.3	52.2	56.8	61.9	67.8	74.3	81.5	88.9	96.7	105	112	120	126	
-110	30.0	39.9	46.7	50.8	54.4	58.4	63.0	68.0	73.7	79.6	85.9	92.1	98.9	105	112	117	122	126	
-100	44.8	55.3	59.2	63.3	67.9	72.7	78.0	83.2	88.8	93.9	99.8	105	110	114	119	122	125	126	
-90	65.9	70.6	75.8	81.0	86.4	91.2	96.9	101	107	111	115	118	122	124	127	127	128	126	
-80	86.2	91.6	97.9	103	109	113	118	121	125	128	131	132	134	134	134	132	130	126	
-70	110	116	122	127	132	136	139	141	144	145	146	146	145	143	141	137	132	126	
-60	134	140	145	150	153	157	158	160	160	160	159	158	155	152	147	141	135	126	
-50	155	161	165	169	172	174	175	176	175	174	172	168	164	159	153	145	136	126	
-40	172	177	182	186	189	190	191	190	189	186	182	178	172	165	157	148	138	126	
-30	185	191	196	200	203	205	205	203	200	196	191	185	178	170	161	151	139	126	
-20	194	201	207	212	215	216	215	213	209	204	198	190	182	174	164	153	140	126	
-10	199	207	213	218	221	222	221	219	215	209	201	193	185	176	165	154	140	126	
0	200	208	214	219	221	222	222	219	215	209	202	194	185	176	165	153	140	126	
10	193	200	206	211	213	215	214	212	209	203	197	190	182	173	163	152	140	126	
20	184	190	196	200	203	205	205	203	200	196	191	185	178	169	160	150	139	126	
30	172	178	183	187	190	192	192	192	190	187	183	178	172	165	157	147	137	126	
40	157	163	168	172	175	178	179	179	178	176	173	169	164	159	152	144	135	126	
50	136	142	148	153	157	160	162	163	163	163	161	159	156	151	146	140	133	126	
60	111	118	124	129	135	138	142	144	146	147	147	146	145	143	140	136	131	126	
70	86.2	92.4	98.1	104	110	115	119	124	127	130	132	133	134	134	133	131	129	126	
80	65.5	70.5	75.6	81.1	86.4	92.0	96.9	103	107	112	115	119	121	124	125	127	126	126	
90	50.9	54.5	58.3	62.7	67.2	72.4	77.6	83.3	88.8	94.7	99.4	105	109	114	118	122	124	126	
100	34.8	44.0	46.8	50.0	53.6	57.9	62.5	67.7	73.3	79.5	85.6	92.2	98.2	105	110	117	121	126	
110	25.2	33.4	37.6	37.9	36.5	40.6	51.0	56.2	61.4	67.3	73.9	81.0	88.3	96.3	104	112	119	126	
120	20.1	25.9	30.7	34.4	37.4	40.4	40.0	38.2	48.5	56.7	64.7	71.9	80.1	88.7	98.0	108	117	126	
130	17.1	21.3	25.4	28.9	32.1	35.2	38.5	42.1	41.7	40.5	52.2	64.9	73.4	82.7	93.1	104	115	126	
140	14.9	18.3	21.7	25.0	28.0	31.1	34.4	38.1	42.2	40.8	40.1	59.6	68.2	77.9	89.2	101	113	126	
150	0.00	0.00	0.00	0.00	8.26	28.3	31.5	35.2	39.2	38.9	38.1	55.5	64.5	74.5	86.0	98.4	112	126	
160	0.00	0.00	0.00	0.00	0.00	0.00	25.8	33.2	36.4	34.8	40.3	53.9	62.2	72.1	84.0	97.0	111	126	
170	0.00	0.00	0.00	0.00	0.00	0.00	0.00	31.1	29.9	35.5	45.8	53.0	61.1	71.1	83.0	96.4	111	126	
180	0.00	0.00	0.00	0.00	0.00	0.00	0.00	32.4	36.5	41.2	46.6	53.2	61.3	71.3	83.3	96.6	111	126	

C Range: 0 - 360DEG

C Interval: 5.0DEG

Test Speed: HIGH

Temperature:25.3°C

Operators:

Test Date:11 November 2022

γ Range: 0 - 140DEG

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: