

# Floodlight Summary:

Report based on lamp delivering 1000 lumens.

Maximum Intensity	1882.7 cd per klm.
(Luminaire orientation as tested.)	-20.0 degrees vertical
	15.5 degrees horizontal

Beam Spread	At 10% of Imax	77.4V x 111.1H
	At 50% of Imax	37.0V x 82.5H
	At 90% of Imax	14.7V x 32.0H

Beam Flux	Total	1633.9 lumens per klm.
	To 10% of Imax	1481.9 lumens per klm.
	To 50% of Imax	888.7 lumens per klm.
	To 90% of Imax	122.3 lumens per klm.

Upward LOR	0.0 %
Downward LOR	163.4 %

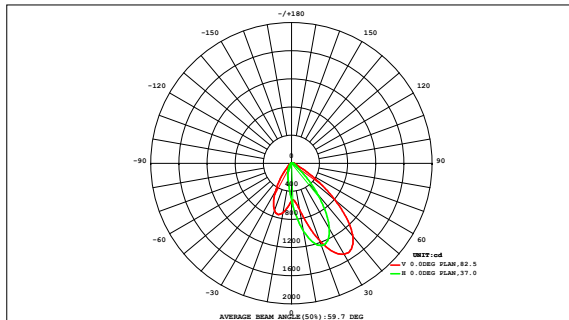
Luminaire Efficiency (Light Output Ratio)	163.4 %
---	---------

C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: HIGH  
Temperature: 25.3°C  
Operators:  
Test Date: 11 November 2022

γ Range: 0 - 90DEG  
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: 93M20TL2030/BL	TYPE:	WEIGHT: 1
SPEC.:	DIM.: F42 x 225	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: cilinder	Shielding Angle:



DATA OF LAMP		PHOTOMETRIC DATA	
MODEL	93M20TL1630/BL	Imax (cd)	1807
NOMINAL POWER (W)	16	AVAILABILITY (%)	148.1
RATED VOLTAGE (V)	48	Avai. FLUX (lm)	1421
NOMINAL FLUX (lm)	960	LOR (%)	163.4
LAMPS INSIDE	1	TOTAL FLUX (lm)	1568
TEST VOLTAGE (V)	48	θ @50% (H,V)	82,37DEG

VERTICAL (DEG)	AREA FLUX DIAGRAM																UNIT:lm		Φ t	Φ a
	0.03	0.11	0.18	0.22	0.22	0.17	0.09	0.03	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.08	0.00
90	0.03	0.11	0.18	0.22	0.22	0.17	0.09	0.03	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.22	0.00
80	0.04	0.13	0.25	0.36	0.42	0.40	0.32	0.20	0.08	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.39	0.00
70	0.04	0.17	0.36	0.59	0.77	0.80	0.69	0.50	0.31	0.13	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.93	0.00
60	0.04	0.20	0.53	1.04	1.58	1.78	1.51	1.06	0.66	0.37	0.12	0.01	0.01	0.01	0.01	0.00	0.00	0.00	22.9	9.67
50	0.05	0.25	0.76	2.05	4.20	5.53	4.55	2.62	1.35	0.75	0.32	0.15	0.14	0.10	0.06	0.02	0.00	0.00	59.3	49.6
40	0.05	0.29	1.11	4.20	10.2	15.0	13.7	7.81	3.18	1.56	0.81	0.47	0.39	0.28	0.16	0.07	0.01	0.00	114	103
30	0.05	0.33	1.55	7.03	18.1	27.5	27.3	17.6	6.95	2.77	1.62	1.05	0.80	0.52	0.29	0.12	0.03	0.00	162	149
20	0.05	0.35	1.90	9.24	24.0	36.6	37.8	26.2	11.4	4.95	3.59	2.78	1.77	0.93	0.44	0.18	0.04	0.00	200	194
10	0.05	0.35	1.97	9.53	25.0	38.3	39.7	28.3	14.9	11.8	12.7	9.84	4.97	1.78	0.66	0.24	0.06	0.00	240	236
0	0.05	0.34	1.73	7.98	20.8	31.8	32.2	23.4	19.8	27.8	32.5	25.0	11.9	3.42	0.91	0.29	0.07	0.00	256	251
-10	0.05	0.31	1.29	5.29	13.2	19.5	19.1	16.5	25.7	42.8	48.8	38.2	18.4	5.06	1.10	0.32	0.08	0.00	225	219
-20	0.05	0.27	0.89	2.73	6.09	8.41	8.24	10.8	25.8	44.6	50.6	40.1	19.6	5.33	1.13	0.32	0.08	0.00	156	141
-30	0.04	0.22	0.61	1.30	2.32	3.02	3.45	6.37	17.6	32.7	38.4	30.0	14.3	4.06	0.98	0.30	0.07	0.00	74.8	61.3
-40	0.04	0.18	0.42	0.71	1.04	1.37	1.80	3.13	7.57	14.9	18.6	14.6	7.06	2.26	0.76	0.26	0.06	0.00	25.6	7.31
-50	0.04	0.15	0.29	0.42	0.53	0.72	0.99	1.48	2.49	4.15	5.33	4.46	2.55	1.20	0.53	0.21	0.05	0.00	10.0	0.00
-60	0.03	0.12	0.20	0.25	0.27	0.33	0.47	0.67	0.99	1.36	1.57	1.45	1.09	0.67	0.36	0.16	0.04	0.00	4.54	0.00
-70	0.03	0.09	0.13	0.14	0.11	0.07	0.12	0.26	0.44	0.58	0.66	0.64	0.54	0.38	0.23	0.10	0.02	0.00	1.71	0.00
-80	0.03	0.07	0.08	0.05	0.02	0.00	0.01	0.04	0.11	0.19	0.25	0.27	0.24	0.19	0.12	0.05	0.01	0.00	---	---
-90	0.03	0.07	0.08	0.05	0.02	0.00	0.01	0.04	0.11	0.19	0.25	0.27	0.24	0.19	0.12	0.05	0.01	0.00	---	---
HORIZONTAL (DEG)																				
Φ t	0.77	3.91	14.2	53.1	129	191	192	147	139	191	216	169	83.8	26.2	7.73	2.65	0.64	0.04	1568	---
Φ a	0.00	0.00	2.91	43.7	120	182	180	135	127	178	206	160	74.2	12.9	0.00	0.00	0.00	0.00	---	1421

one-half-peak spread: U:19.5,D:17.8 , L:22.0,R:13.3

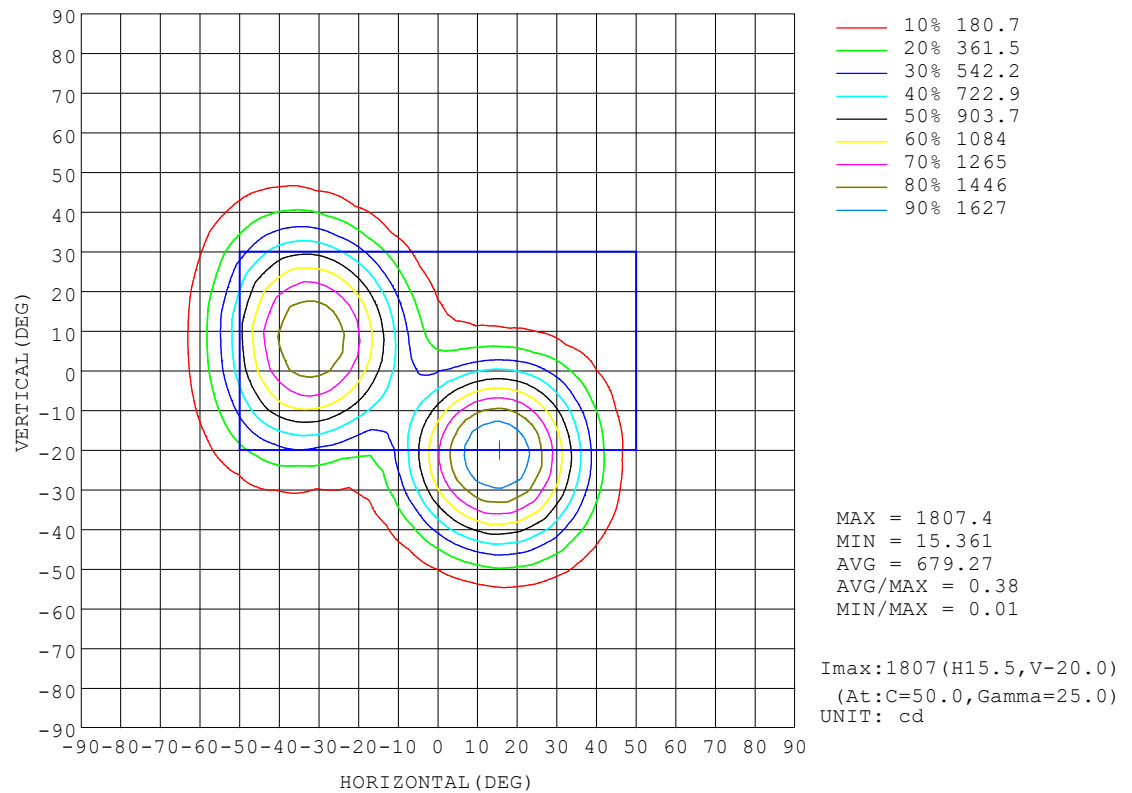
NEMA Beam Type: Type 6 x 5 (H x V)

C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: HIGH  
Temperature:25.3°C  
Operators:  
Test Date:11 November 2022

γ Range: 0 - 90DEG  
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: 93M20TL2030/BL	TYPE:	WEIGHT: 1
SPEC.:	DIM.: F42 x 225	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: cilinder	Shielding Angle:

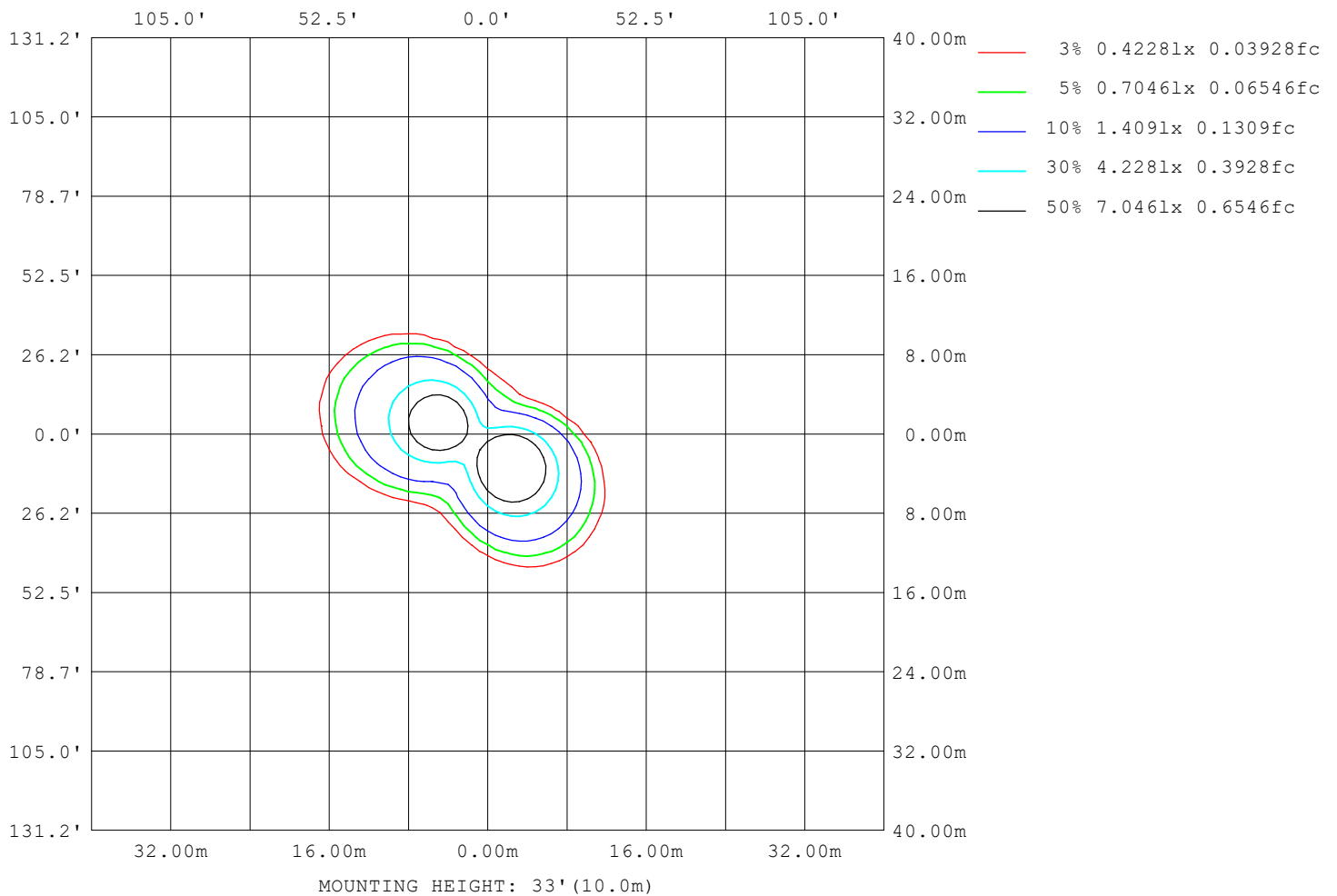


C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: HIGH  
Temperature:25.3°C  
Operators:  
Test Date:11 November 2022

γ Range: 0 - 90DEG  
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**

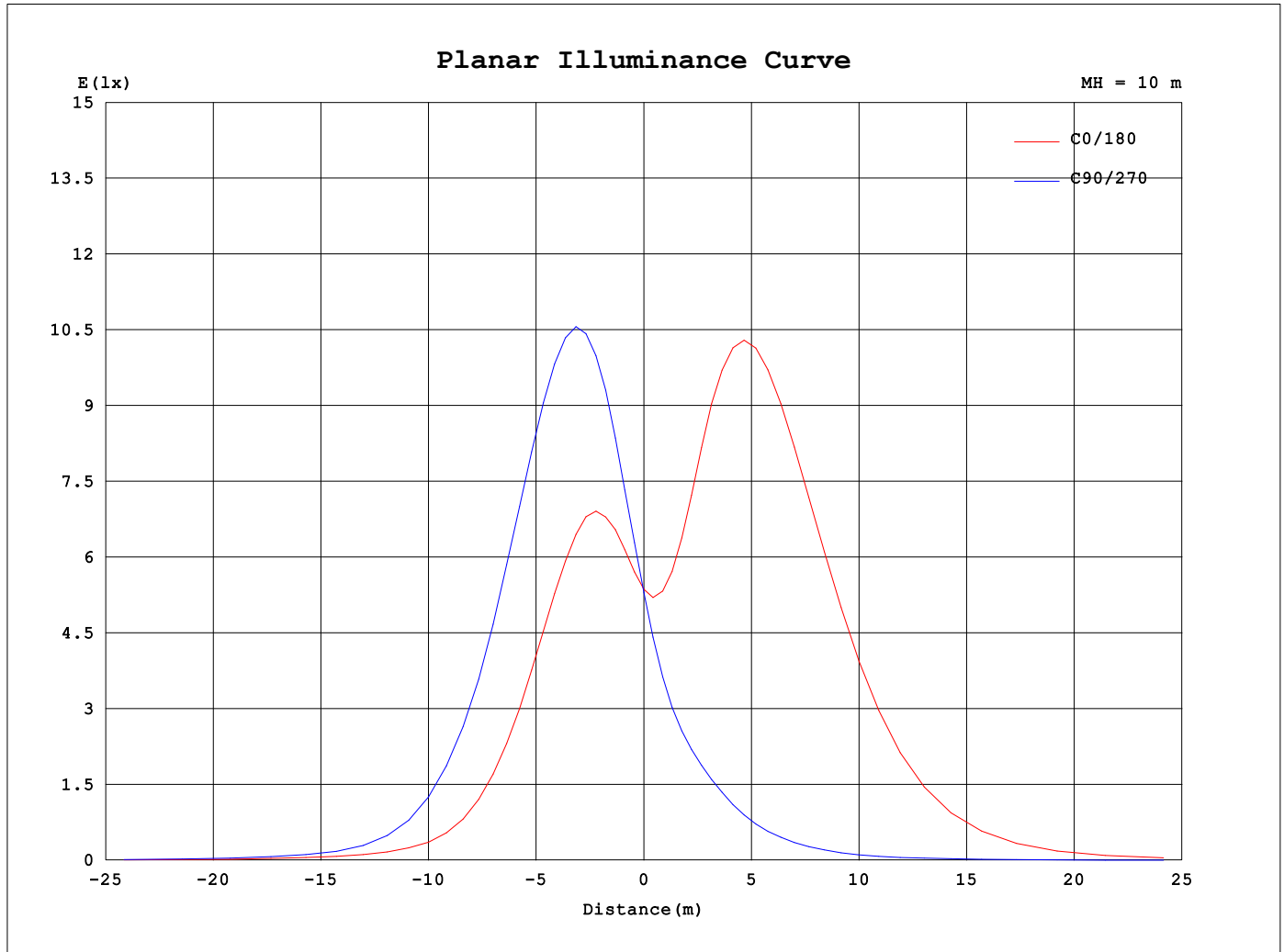
NAME: 93M20TL2030/BL	TYPE:	WEIGHT: 1
SPEC.:	DIM.: F42 x 225	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: cilinder	Shielding Angle:



C Range: 0 - 360DEG  
 C Interval: 10.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3°C  
 Operators:  
 Test Date: 11 November 2022

γ Range: 0 - 90DEG  
 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

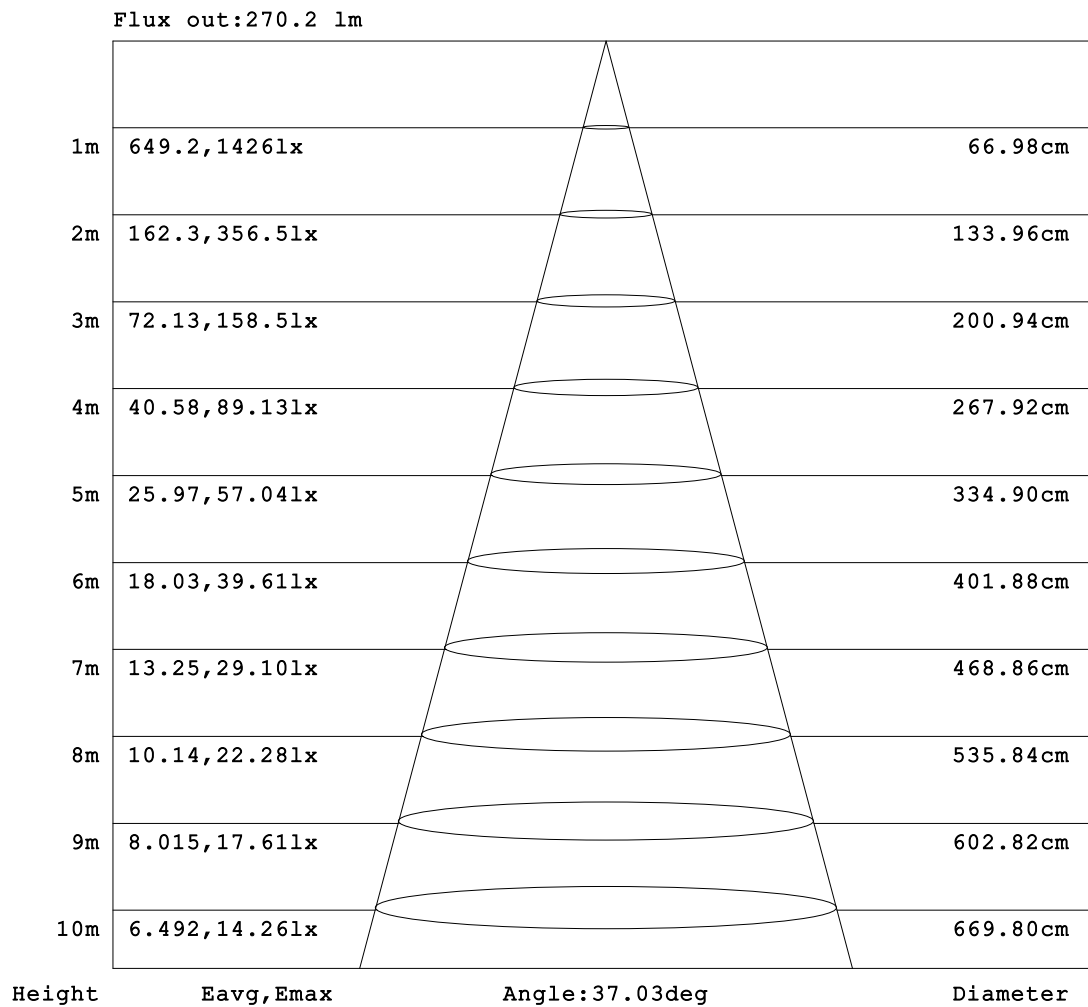


C Range: 0 - 360DEG  
 C Interval: 10.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3°C  
 Operators:  
 Test Date: 11 November 2022

γ Range: 0 - 90DEG  
 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: 93M20TL2030/BL	TYPE:	WEIGHT: 1
SPEC.:	DIM.: F42 x 225	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: HIGH  
 Temperature: 25.3°C  
 Operators:  
 Test Date: 11 November 2022

γ Range: 0 - 90DEG  
 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: 93M20TL2030/BL	TYPE:	WEIGHT: 1
SPEC.:	DIM.: F42 x 225	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: cilinder	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
-90	10.8	9.81	8.84	7.30	5.76	4.02	2.27	1.20	0.13	0.09	0.04	0.04	0.04	0.04	0.05	0.06	0.07	0.32	0.57
-85	10.8	10.3	9.81	8.64	7.39	5.92	4.40	2.85	1.20	0.73	0.08	0.07	0.07	0.07	0.07	0.78	1.55	3.15	4.75
-80	10.8	10.8	10.8	10.0	9.15	7.98	6.60	5.16	3.57	2.29	0.69	0.48	0.16	0.95	2.07	4.07	6.12	8.19	10.2
-75	10.8	11.3	11.8	11.5	11.0	10.2	9.12	7.90	6.40	4.89	3.27	2.45	1.84	3.82	6.18	8.83	11.5	14.2	16.8
-70	10.8	11.8	12.8	13.1	13.1	12.7	12.0	11.0	9.58	8.18	6.70	6.63	7.34	9.31	11.3	14.5	17.9	21.5	24.9
-65	10.8	12.3	13.9	14.8	15.3	15.5	15.1	14.4	13.3	12.1	11.9	12.8	14.6	16.6	19.0	22.3	25.8	31.4	37.5
-60	10.8	12.8	14.9	16.5	17.7	18.4	18.7	18.4	17.7	16.9	18.3	20.2	22.6	25.3	28.7	33.3	39.3	48.0	57.0
-55	10.8	13.3	16.0	18.4	20.4	21.9	23.4	23.2	23.7	23.6	26.2	28.4	31.6	34.9	40.7	48.8	60.1	76.5	95.1
-50	10.8	13.8	17.1	20.3	23.5	26.3	29.3	30.6	31.9	33.8	36.6	39.2	42.5	46.8	55.9	69.2	93.1	132	184
-45	10.8	14.3	18.1	22.5	27.2	31.9	36.5	40.3	42.5	47.8	49.8	54.2	56.7	63.4	75.9	97.5	150	236	355
-40	10.8	14.8	19.2	24.8	31.3	38.5	44.9	53.4	60.2	67.9	73.7	76.0	78.5	86.1	100	143	239	392	590
-35	10.8	15.2	20.3	27.0	36.0	45.9	57.7	71.3	90.3	99.0	118	111	116	116	137	205	348	570	850
-30	10.8	15.6	21.3	29.5	40.5	54.9	75.4	98.3	138	172	186	198	178	181	193	269	454	738	1078
-25	10.8	16.0	22.3	32.0	45.4	64.6	99.1	150	208	281	323	329	319	286	267	344	546	858	1217
-20	10.8	16.3	23.2	34.3	50.3	77.5	129	215	322	425	504	539	510	465	410	430	594	891	1246
-15	10.8	16.5	23.9	36.3	55.0	91.1	166	293	452	613	732	790	777	689	591	543	622	839	1157
-10	10.8	16.8	24.6	38.1	59.3	104	203	368	583	810	980	1064	1051	955	801	663	636	741	974
-5	10.8	17.0	25.2	39.5	63.0	117	239	438	700	972	1186	1303	1306	1201	1003	790	648	632	742
0	10.8	17.1	25.6	40.5	65.9	127	268	497	803	1115	1360	1488	1495	1383	1170	907	668	539	537
5	10.8	17.1	25.7	40.9	67.2	132	281	524	845	1172	1428	1566	1584	1480	1260	976	686	471	368
10	10.8	17.1	25.8	40.9	67.4	133	284	532	860	1201	1444	1571	1583	1487	1267	977	668	420	268
15	10.8	17.0	25.6	40.5	66.4	129	276	516	816	1123	1371	1515	1504	1407	1190	906	609	364	209
20	10.8	16.9	25.3	39.7	64.1	121	248	453	727	1017	1231	1342	1357	1235	1037	777	507	296	163
25	10.8	16.8	24.8	38.4	60.4	105	209	387	622	847	1026	1130	1115	1015	824	600	382	215	120
30	10.8	16.5	24.1	36.7	55.8	92.4	171	312	482	654	803	865	851	747	597	416	251	141	88.3
35	10.8	16.3	23.2	34.7	51.0	78.1	136	230	349	474	566	606	581	490	379	261	157	94.4	64.2
40	10.8	16.0	22.2	32.6	45.6	66.8	103	161	236	311	365	383	352	295	208	145	94.7	62.7	45.5
45	10.8	15.6	21.3	30.0	41.0	56.0	79.5	113	150	188	210	218	187	159	116	80.0	59.7	42.0	30.4
50	10.8	15.2	20.4	27.3	36.4	48.0	61.3	81.0	97.5	112	120	117	104	84.5	67.9	50.1	39.8	30.0	21.6
55	10.8	14.8	19.4	24.9	32.1	40.4	48.4	57.4	67.7	70.9	73.0	67.1	61.7	51.3	43.8	34.7	27.3	21.3	16.1
60	10.8	14.3	18.3	22.3	27.8	33.7	38.9	43.8	47.3	48.7	48.1	44.8	41.0	35.3	29.5	24.1	19.4	15.2	11.2
65	10.8	13.9	17.3	20.5	24.2	27.8	31.2	33.9	35.2	35.2	34.0	31.5	28.1	24.2	20.6	17.0	13.5	10.2	6.90
70	10.8	13.4	16.2	18.6	21.1	23.2	24.7	26.1	26.1	25.8	24.1	22.2	19.8	17.1	14.3	11.5	8.54	5.87	3.10
75	10.8	12.9	15.1	16.8	18.5	19.5	20.2	20.4	20.1	19.2	17.8	16.0	13.9	11.6	9.13	6.69	4.14	2.29	0.36
80	10.8	12.4	14.1	15.1	16.2	16.5	16.6	16.2	15.5	14.3	12.7	11.0	9.11	6.95	4.68	2.79	0.74	0.41	0.11
85	10.8	11.9	13.0	13.5	14.0	13.7	13.4	12.5	11.6	10.2	8.64	6.84	4.98	3.08	1.05	0.62	0.18	0.15	0.11
90	10.8	11.4	12.0	11.9	11.9	11.2	10.5	9.37	8.19	6.66	5.12	3.38	1.63	0.95	0.27	0.24	0.22	0.19	0.16

C Range: 0 - 360DEG

C Interval: 10.0DEG

Test Speed: HIGH

Temperature:25.3°C

Operators:

Test Date:11 November 2022

γ Range: 0 - 90DEG

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: 93M20TL2030/BL	TYPE:	WEIGHT: 1
SPEC.:	DIM.: F42 x 225	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: cilinder	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	
-90	1.46	2.35	3.23	4.11	4.61	5.11	5.16	5.22	4.87	4.53	3.72	2.90	2.03	1.16	0.91	0.66	0.61	0.57	
-85	6.07	7.36	8.33	9.23	9.57	9.86	9.65	9.41	8.59	7.75	6.53	5.30	3.73	2.26	1.33	0.67	0.61	0.57	
-80	11.8	13.4	14.5	15.4	15.6	15.6	14.9	14.1	12.8	11.3	9.57	7.77	5.66	3.59	1.76	0.68	0.60	0.57	
-75	18.9	20.8	22.0	22.9	22.8	22.4	21.2	19.8	17.6	15.4	12.9	10.4	7.68	5.05	2.60	0.73	0.59	0.57	
-70	28.0	30.8	33.1	34.2	33.5	32.0	29.6	26.5	23.2	19.9	16.5	13.1	9.73	6.53	3.38	1.12	0.58	0.57	
-65	43.1	47.9	51.3	52.4	50.4	47.5	42.7	36.9	30.3	25.1	20.3	16.0	11.8	7.98	4.37	1.48	0.57	0.57	
-60	68.5	78.3	86.0	86.2	81.0	72.1	62.0	50.3	41.0	31.8	24.6	18.9	13.9	9.36	5.27	1.78	0.55	0.57	
-55	125	151	170	165	153	122	96.6	71.5	53.9	40.3	29.7	21.9	16.0	10.7	6.14	2.27	0.62	0.57	
-50	257	315	351	338	297	231	162	106	71.0	50.0	35.6	25.0	17.9	11.9	6.90	2.68	0.67	0.57	
-45	485	585	636	608	520	406	268	163	95.1	61.1	41.7	28.2	19.6	13.1	7.58	2.98	0.71	0.57	
-40	789	932	993	954	810	621	414	245	131	74.3	47.7	30.9	21.2	14.0	8.14	3.20	0.73	0.57	
-35	1103	1274	1335	1279	1117	843	567	331	179	89.0	52.9	34.1	22.4	14.7	8.53	3.42	0.73	0.57	
-30	1363	1547	1607	1539	1343	1047	696	409	206	103	56.5	36.2	23.4	15.2	8.82	3.56	0.72	0.57	
-25	1513	1700	1761	1704	1490	1156	783	458	227	106	60.1	37.3	23.8	15.5	8.97	3.60	0.69	0.57	
-20	1542	1738	1805	1725	1512	1186	796	463	231	110	60.2	37.4	23.8	15.6	8.96	3.56	0.65	0.57	
-15	1448	1642	1704	1633	1425	1091	729	429	219	105	57.7	36.6	23.5	15.3	8.79	3.43	0.59	0.57	
-10	1228	1406	1472	1404	1208	922	615	359	180	92.5	54.5	34.8	22.6	14.8	8.48	3.23	0.53	0.57	
-5	925	1069	1131	1074	917	695	467	277	147	80.0	49.3	31.9	21.3	14.0	8.03	2.96	0.47	0.57	
0	622	712	755	714	610	462	311	182	102	63.0	42.4	28.1	19.6	13.0	7.45	2.63	0.40	0.57	
5	372	403	418	394	334	264	189	123	78.1	52.4	36.4	25.2	17.9	11.9	6.73	2.39	0.39	0.57	
10	226	217	212	203	176	146	109	75.6	54.3	41.1	30.0	22.0	15.8	10.6	5.92	2.12	0.39	0.57	
15	151	128	112	102	92.8	82.5	65.5	54.0	42.1	32.2	23.9	18.6	13.7	9.12	5.03	1.82	0.38	0.57	
20	114	92.4	73.8	61.0	56.9	51.0	45.9	38.6	31.3	25.4	20.0	15.5	11.4	7.60	4.08	1.52	0.38	0.57	
25	86.5	69.5	54.1	38.5	36.9	34.9	31.2	27.9	23.5	19.8	16.3	12.7	9.19	6.00	3.10	1.22	0.38	0.57	
30	65.9	52.7	38.0	27.1	24.6	23.5	22.2	20.0	17.9	15.4	12.6	9.96	7.18	4.42	2.11	0.94	0.38	0.57	
35	50.1	39.6	26.7	17.3	16.5	16.3	15.5	14.5	12.8	11.2	9.29	7.28	5.11	3.09	1.21	0.70	0.38	0.57	
40	35.6	26.9	18.0	10.5	10.4	10.3	10.1	9.50	8.58	7.42	6.18	4.72	3.20	1.88	0.61	0.48	0.38	0.57	
45	24.1	16.9	9.30	5.98	5.11	5.24	5.33	5.11	4.66	4.02	3.30	2.55	1.43	1.06	0.33	0.39	0.39	0.57	
50	16.7	10.9	4.65	2.40	0.99	1.43	1.54	1.68	1.54	1.45	1.11	1.05	0.43	0.47	0.22	0.34	0.39	0.57	
55	12.0	7.83	3.85	1.49	0.10	0.07	0.11	0.22	0.16	0.28	0.13	0.30	0.13	0.27	0.21	0.31	0.40	0.57	
60	7.84	4.54	1.82	0.28	0.06	0.04	0.04	0.04	0.05	0.07	0.08	0.10	0.13	0.18	0.21	0.29	0.40	0.57	
65	4.12	1.59	0.57	0.05	0.04	0.04	0.04	0.04	0.05	0.07	0.08	0.09	0.14	0.18	0.23	0.31	0.42	0.57	
70	1.47	0.08	0.06	0.04	0.04	0.04	0.04	0.04	0.06	0.07	0.08	0.10	0.15	0.20	0.25	0.33	0.44	0.57	
75	0.21	0.08	0.06	0.04	0.05	0.05	0.04	0.05	0.07	0.09	0.10	0.12	0.17	0.23	0.29	0.35	0.46	0.57	
80	0.11	0.10	0.08	0.06	0.07	0.07	0.06	0.06	0.08	0.11	0.13	0.14	0.20	0.27	0.32	0.39	0.47	0.57	
85	0.12	0.13	0.10	0.08	0.09	0.10	0.09	0.08	0.11	0.14	0.16	0.18	0.24	0.30	0.36	0.42	0.49	0.57	
90	0.16	0.16	0.14	0.11	0.12	0.12	0.12	0.11	0.14	0.16	0.19	0.23	0.28	0.34	0.40	0.46	0.51	0.57	

C Range: 0 - 360DEG

C Interval: 10.0DEG

Test Speed: HIGH

Temperature:25.3°C

Operators:

Test Date:11 November 2022

γ Range: 0 - 90DEG

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: