

# Floodlight Summary:

Report based on lamp delivering 1000 lumens.

Maximum Intensity	1842.0 cd per klm.
(Luminaire orientation as tested.)	6.5 degrees vertical
	32.0 degrees horizontal

Beam Spread	At 10% of Imax	76.2V x 137.2H
	At 50% of Imax	39.1V x 112.1H
	At 90% of Imax	15.4V x 102.6H

Beam Flux	Total	1629.2 lumens per klm.
	To 10% of Imax	1472.1 lumens per klm.
	To 50% of Imax	847.2 lumens per klm.
	To 90% of Imax	102.9 lumens per klm.

Upward LOR	0.0 %
Downward LOR	162.9 %

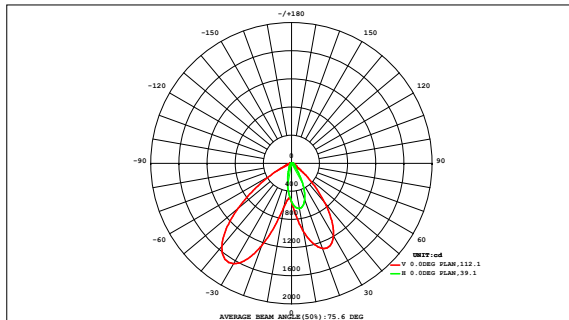
Luminaire Efficiency (Light Output Ratio)	162.9 %
---	---------

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)	1768
NOMINAL POWER (W)	16	AVAILABILITY (%)	147.5
RATED VOLTAGE (V)	48	Avai. FLUX (lm)	1416
NOMINAL FLUX (lm)	960	LOR (%)	162.9
LAMPS INSIDE	1	TOTAL FLUX (lm)	1564
TEST VOLTAGE (V)	48	θ @50% (H,V)	112,39DEG

90 80 70 60 50 40 30 20 10 0 -10 -20 -30 -40 -50 -60 -70 -80 -90	AREA FLUX DIAGRAM																UNIT:lm				Φ t	Φ a									
	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.02	0.08	0.17	0.23	0.24	0.20	0.13	0.04	1.15	0.00											
0.01	0.02	0.03	0.02	0.02	0.01	0.00	0.00	0.00	0.00	0.05	0.17	0.31	0.41	0.44	0.40	0.29	0.16	0.04	2.38	0.00											
0.01	0.04	0.07	0.09	0.10	0.08	0.04	0.01	0.09	0.27	0.48	0.67	0.81	0.82	0.66	0.41	0.19	0.05	4.91	0.00												
0.01	0.06	0.13	0.20	0.25	0.26	0.12	0.10	0.33	0.62	1.01	1.48	1.81	1.68	1.14	0.60	0.24	0.05	10.1	0.00												
0.02	0.08	0.19	0.33	0.47	0.50	0.27	0.30	0.64	1.25	2.44	4.28	5.51	4.48	2.32	0.89	0.29	0.06	24.3	10.2												
0.02	0.10	0.26	0.53	0.87	1.16	1.20	1.02	1.19	2.60	6.90	13.0	15.2	11.0	4.88	1.33	0.35	0.06	61.7	49.7												
0.02	0.12	0.35	0.85	1.82	3.22	4.16	3.79	3.03	5.65	16.0	27.6	29.3	20.1	8.20	1.91	0.39	0.06	127	109												
0.02	0.14	0.46	1.38	4.34	9.57	13.3	12.0	8.02	10.6	25.6	40.1	40.2	27.1	11.0	2.40	0.43	0.07	207	201												
0.02	0.15	0.56	2.19	8.53	19.7	28.0	26.6	17.6	14.8	28.7	43.0	42.3	28.8	11.8	2.57	0.45	0.07	276	272												
0.02	0.16	0.63	2.94	12.2	27.8	39.1	38.2	25.8	15.9	22.6	34.9	35.7	24.5	10.1	2.30	0.44	0.07	293	290												
0.02	0.16	0.64	3.11	12.9	29.4	41.6	41.0	27.4	13.4	12.8	20.3	22.4	15.9	6.75	1.72	0.39	0.06	250	246												
0.02	0.16	0.59	2.51	10.1	23.5	33.6	32.0	20.1	8.63	5.65	8.08	9.67	7.44	3.53	1.16	0.33	0.06	167	159												
0.02	0.15	0.49	1.67	5.83	13.1	18.4	16.5	9.56	4.17	2.68	2.84	3.20	2.74	1.66	0.76	0.28	0.06	84.1	65.0												
0.02	0.13	0.39	1.00	2.49	4.93	6.39	5.34	3.16	1.85	1.40	1.29	1.27	1.17	0.89	0.52	0.23	0.05	32.5	12.6												
0.02	0.11	0.29	0.62	1.11	1.63	1.83	1.57	1.12	0.82	0.70	0.63	0.60	0.61	0.53	0.36	0.19	0.05	12.8	0.00												
0.02	0.09	0.21	0.39	0.58	0.73	0.76	0.66	0.49	0.33	0.22	0.21	0.28	0.33	0.33	0.26	0.15	0.04	6.09	0.00												
0.01	0.07	0.15	0.24	0.32	0.36	0.34	0.28	0.18	0.08	0.02	0.03	0.08	0.15	0.19	0.17	0.12	0.04	2.83	0.00												
0.01	0.05	0.09	0.13	0.15	0.14	0.10	0.05	0.02	0.00	0.00	0.00	0.01	0.03	0.08	0.11	0.09	0.04	1.10	0.00												
-90	-80	-70	-60	-50	-40	-30	-20	HORIZONTAL (DEG)																20	30	40	50	60	70	80	90
Φ t	0.31	1.79	5.56	18.2	62.1	136	189	179	119	81.0	127	199	209	148	64.8	18.0	4.84	0.97	1564	---											
Φ a	0.00	0.00	0.00	5.37	52.6	127	181	171	108	67.5	115	189	200	139	55.6	6.38	0.00	0.00	---		1416										

one-half-peak spread: U:19.2,D:20.2 , L:27.6,R:29.6

NEMA Beam Type: Type 7 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

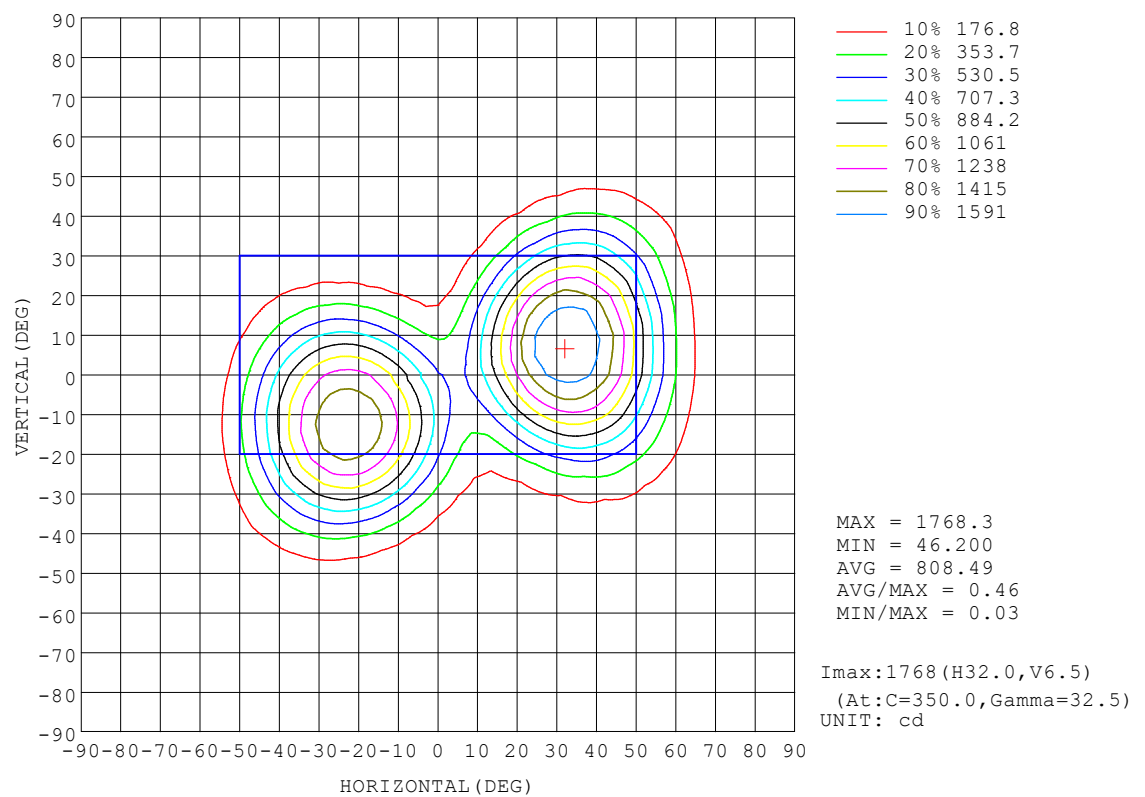
Humidity:65.0%

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:

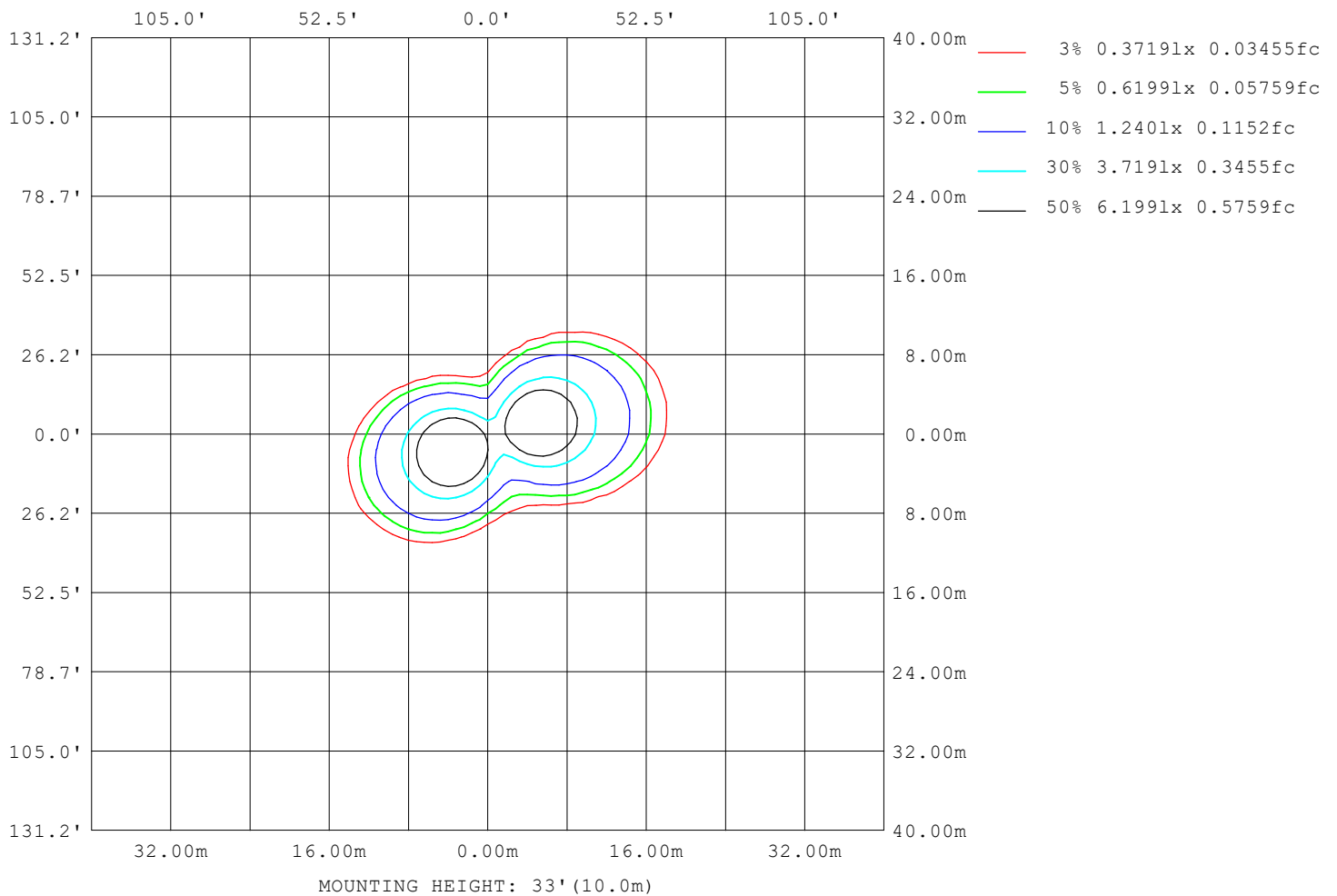


C Range: 0 - 360DEG  
 C Interval: 10.0DEG  
 Test Speed: HIGH  
 Temperature:25.3°C  
 Operators:  
 Test Date:11 November 2022

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**

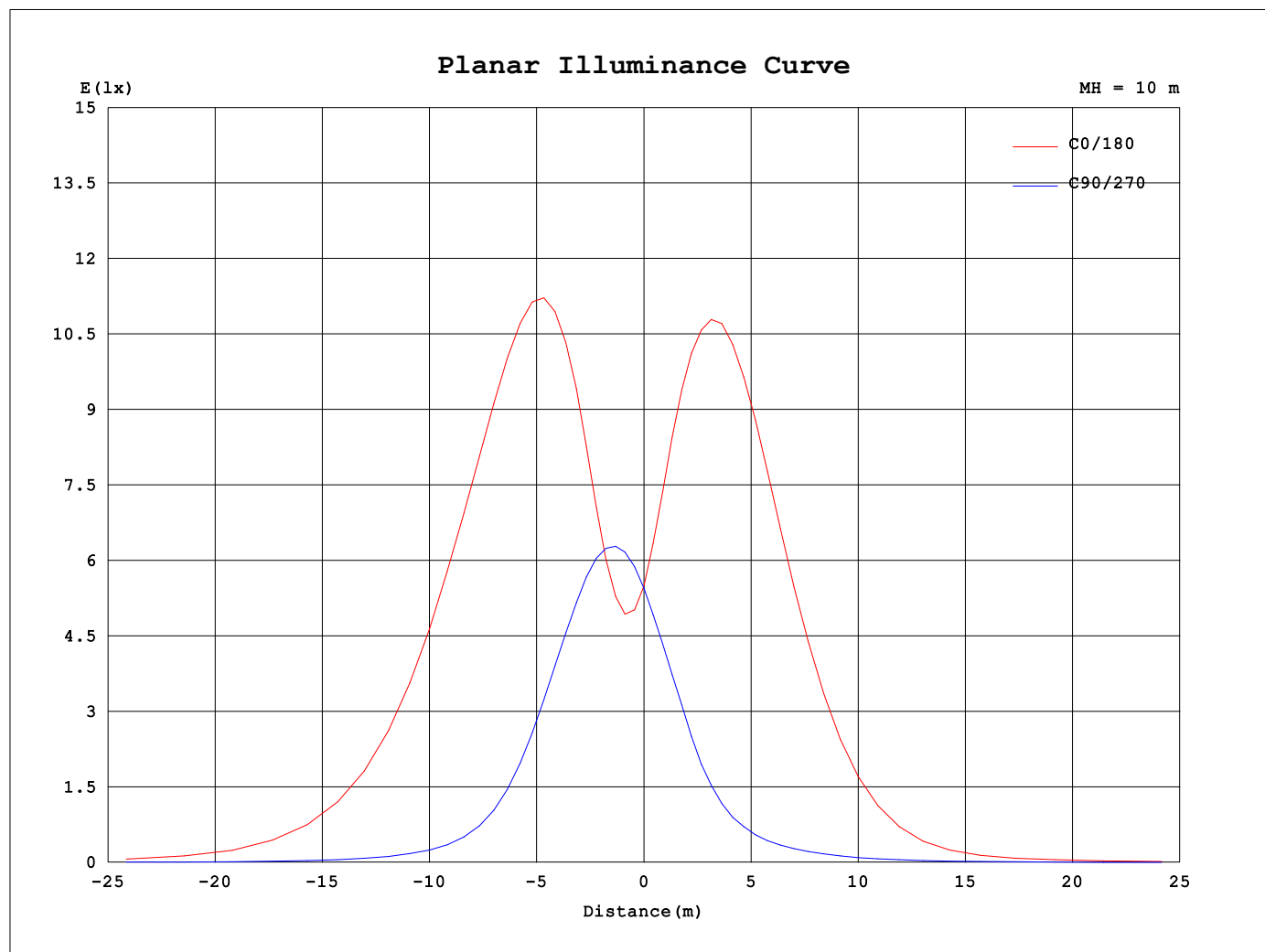
NAME: 93M20TL2030/BL	TYPE:	WEIGHT: 1
SPEC.:	DIM.: F42 x 225	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: cilinder	Shielding Angle:



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

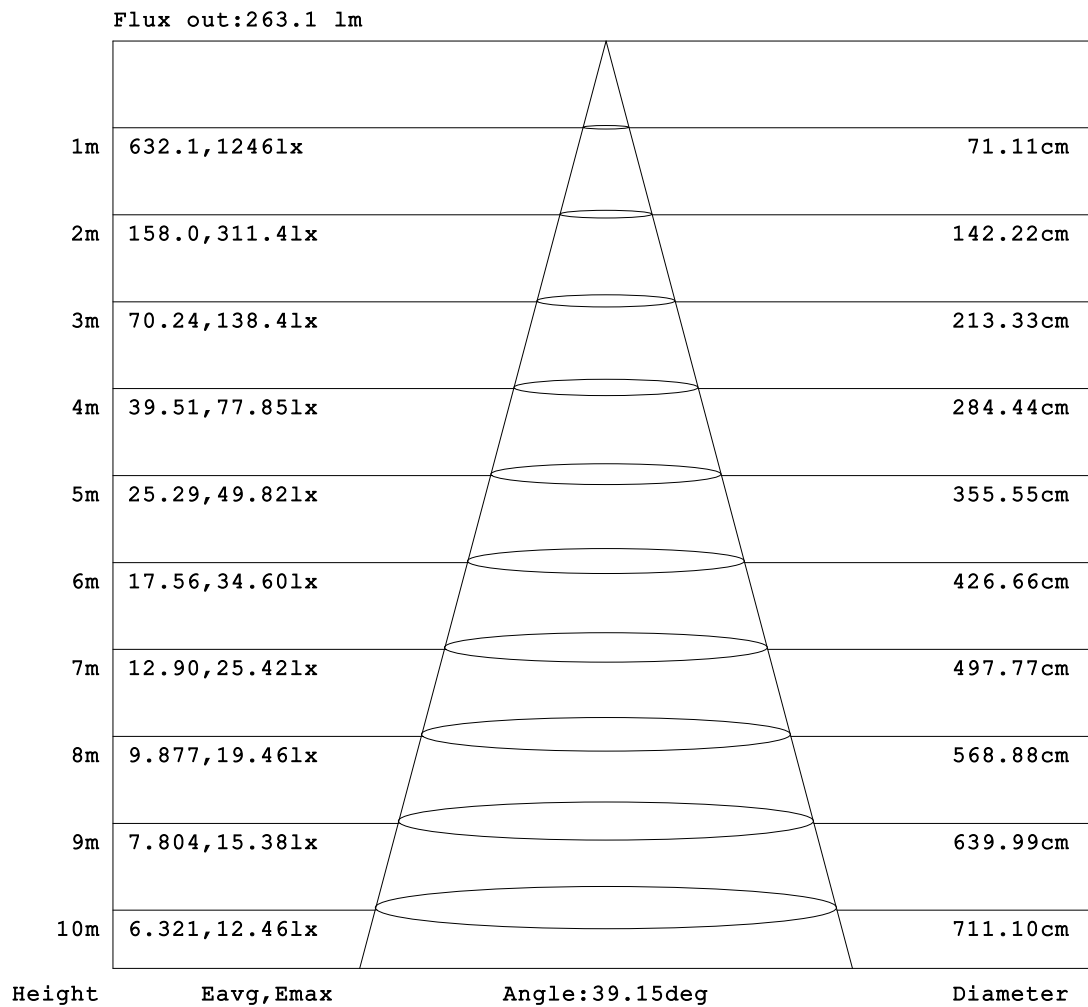


C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: HIGH  
Temperature: 25.3°C  
Operators:  
Test Date: 11 November 2022

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  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: 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	2.87	3.77	4.67	5.06	5.46	5.41	5.36	4.95	4.54	3.75	2.96	2.01	1.07	0.63	0.19	0.16	0.13	0.10	0.07
-85	2.87	4.14	5.42	6.19	6.95	7.30	7.64	7.55	7.41	6.91	6.36	5.45	4.50	3.38	2.19	1.28	0.29	0.18	0.08
-80	2.87	4.49	6.15	7.31	8.53	9.35	10.1	10.5	10.7	10.5	10.2	9.51	8.62	7.49	6.23	4.79	3.27	1.93	0.53
-75	2.87	4.84	6.86	8.51	10.2	11.6	12.9	13.8	14.5	14.8	14.8	14.3	13.5	12.4	11.0	9.37	7.54	5.79	3.94
-70	2.87	5.17	7.59	9.68	11.9	13.9	15.9	17.5	18.9	19.8	20.2	20.1	19.4	18.3	16.7	14.8	12.6	10.5	8.14
-65	2.87	5.48	8.28	10.9	13.7	16.4	19.2	21.8	24.4	26.5	28.3	28.8	28.2	26.7	24.5	21.8	18.8	16.0	13.1
-60	2.87	5.77	8.93	12.1	15.5	19.1	22.9	27.8	32.4	36.8	39.7	41.9	42.0	40.2	37.4	33.1	27.9	23.4	18.9
-55	2.87	6.06	9.61	13.4	17.4	22.0	28.0	35.5	42.4	50.2	57.2	62.4	64.4	62.5	58.0	50.8	42.9	35.6	29.0
-50	2.87	6.33	10.2	14.5	19.2	25.5	33.8	43.9	56.0	70.7	87.6	104	115	112	104	85.4	70.4	56.2	45.9
-45	2.87	6.57	10.8	15.7	21.1	29.1	40.1	54.6	76.5	105	149	189	218	221	206	167	133	95.4	70.4
-40	2.87	6.78	11.3	16.7	22.9	33.1	46.7	69.9	107	177	252	334	392	413	386	330	254	173	113
-35	2.87	6.95	11.7	17.5	24.9	36.7	54.4	89.6	154	262	391	525	624	675	646	562	438	303	188
-30	2.87	7.09	12.1	18.2	26.6	40.2	62.8	107	205	358	557	741	899	969	951	842	668	470	304
-25	2.87	7.20	12.4	18.8	28.0	42.9	70.5	129	260	456	706	961	1144	1248	1239	1114	910	663	435
-20	2.87	7.27	12.6	19.2	29.1	45.5	75.9	145	301	542	831	1114	1344	1443	1441	1326	1102	823	550
-15	2.87	7.31	12.7	19.4	29.6	46.5	79.5	161	330	585	900	1210	1424	1548	1544	1427	1207	921	629
-10	2.87	7.31	12.7	19.4	29.6	46.4	79.1	161	335	599	910	1201	1423	1544	1537	1427	1211	931	654
-5	2.87	7.27	12.6	19.2	29.0	45.3	75.6	150	310	555	852	1132	1343	1445	1435	1328	1117	858	624
0	2.87	7.20	12.4	18.9	28.1	43.4	69.6	131	268	482	747	999	1196	1296	1291	1175	983	746	550
5	2.87	7.08	12.1	18.3	26.9	40.9	63.5	114	218	386	592	794	955	1034	1021	918	753	572	439
10	2.87	6.92	11.7	17.6	25.4	37.8	56.5	94.7	163	279	431	579	695	750	733	647	521	398	328
15	2.87	6.73	11.3	16.8	23.7	34.2	49.1	74.6	118	193	285	374	454	479	465	403	324	250	216
20	2.87	6.51	10.8	15.8	21.9	30.4	42.0	58.4	84.5	121	176	224	254	275	260	221	184	150	141
25	2.87	6.27	10.2	14.7	19.9	26.4	35.8	47.2	60.7	79.5	105	118	140	142	133	124	108	93.4	95.6
30	2.87	5.99	9.52	13.5	18.0	23.3	30.0	37.5	46.2	55.3	62.7	71.7	74.4	79.4	73.3	66.5	56.7	54.8	66.5
35	2.87	5.70	8.82	12.3	16.1	20.2	24.8	30.0	35.3	39.4	44.1	45.8	43.6	41.1	37.5	31.7	29.5	35.5	49.8
40	2.87	5.38	8.08	11.1	14.2	17.4	20.5	23.9	26.5	29.3	31.1	30.3	25.0	19.4	13.4	16.0	19.8	27.1	37.9
45	2.87	5.05	7.35	9.79	12.3	14.7	17.0	19.0	20.3	21.7	22.0	20.1	14.5	8.37	6.22	9.52	14.7	20.7	27.4
50	2.87	4.70	6.61	8.51	10.4	12.2	13.8	14.9	15.8	16.3	16.2	14.9	10.6	4.25	3.38	5.93	10.5	15.4	20.6
55	2.87	4.34	5.84	7.27	8.63	9.83	10.8	11.3	11.8	11.8	11.5	10.7	8.32	3.93	2.05	2.72	6.50	10.7	15.0
60	2.87	3.96	5.06	6.02	6.89	7.58	8.02	8.19	8.20	7.87	7.32	6.54	5.46	3.65	1.50	1.06	3.04	6.35	9.88
65	2.87	3.63	4.31	4.86	5.27	5.51	5.52	5.40	5.06	4.50	3.77	2.97	2.09	1.33	0.57	0.24	0.40	2.69	5.50
70	2.87	3.30	3.57	3.71	3.73	3.61	3.25	2.97	2.33	1.94	1.09	0.74	0.28	0.10	0.06	0.04	0.03	0.67	1.43
75	2.87	2.96	2.82	2.72	2.30	2.07	1.32	1.25	0.67	0.54	0.34	0.17	0.07	0.04	0.03	0.03	0.03	0.05	0.06
80	2.87	2.63	2.22	1.76	1.23	1.01	0.39	0.46	0.38	0.32	0.28	0.18	0.08	0.05	0.03	0.04	0.04	0.05	0.05
85	2.87	2.30	1.64	1.22	0.58	0.45	0.28	0.34	0.39	0.34	0.28	0.18	0.09	0.06	0.03	0.04	0.06	0.05	0.05
90	2.87	1.97	1.08	0.74	0.40	0.35	0.30	0.35	0.40	0.34	0.28	0.19	0.10	0.07	0.05	0.06	0.06	0.07	0.07

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	0.07	0.07	0.06	0.06	0.06	0.07	0.07	0.08	0.28	0.47	2.25	4.04	6.08	8.12	9.91	11.7	13.0	14.2	
-85	0.08	0.08	0.07	0.06	0.07	0.08	0.12	0.18	1.45	2.49	4.53	6.49	8.31	10.1	11.5	12.8	13.6	14.2	
-80	0.31	0.11	0.09	0.07	0.08	0.18	1.02	1.62	3.67	5.47	7.44	9.19	10.8	12.2	13.1	14.0	14.2	14.2	
-75	2.22	0.61	0.31	0.18	0.68	1.20	3.21	4.97	7.00	8.85	10.7	12.2	13.5	14.5	15.0	15.2	14.8	14.2	
-70	5.98	3.79	2.19	1.36	2.94	4.57	6.78	8.87	10.9	12.7	14.5	15.7	16.6	17.0	16.8	16.5	15.4	14.2	
-65	10.4	8.05	7.31	6.66	7.18	8.91	11.2	13.5	15.5	17.3	18.7	19.6	19.8	19.6	18.9	17.7	16.0	14.2	
-60	16.9	15.1	14.6	14.2	13.9	14.7	16.4	18.9	20.8	22.7	23.6	24.0	23.5	22.5	20.9	19.0	16.6	14.2	
-55	26.4	24.3	23.4	22.8	22.3	22.5	22.9	25.8	27.5	29.8	29.6	29.7	27.8	25.9	23.2	20.3	17.2	14.2	
-50	40.1	35.8	33.5	32.8	32.4	33.0	33.8	35.7	38.0	39.4	38.7	36.9	33.3	29.6	25.5	21.7	17.8	14.2	
-45	59.0	51.0	45.8	45.1	46.1	47.1	50.1	49.5	53.5	52.1	50.8	45.9	40.1	34.2	28.2	22.9	18.4	14.2	
-40	85.7	70.8	63.9	61.8	66.1	70.6	74.3	78.8	77.5	73.9	67.4	56.5	48.3	39.1	31.1	24.2	18.9	14.2	
-35	126	97.9	88.2	89.3	94.6	113	118	131	117	112	90.8	73.3	57.5	44.8	33.9	25.6	19.4	14.2	
-30	185	133	121	136	163	185	224	216	209	173	128	98.0	69.5	50.5	37.0	27.0	19.9	14.2	
-25	269	187	179	214	282	349	379	386	344	263	195	134	82.4	56.9	40.2	28.2	20.4	14.2	
-20	354	255	272	369	485	569	625	605	520	404	277	176	100	64.2	43.0	29.4	20.7	14.2	
-15	422	349	419	575	737	869	914	863	742	562	375	221	119	71.7	45.6	30.4	21.1	14.2	
-10	472	453	590	816	1034	1168	1205	1134	968	720	472	269	138	79.0	47.8	31.3	21.4	14.2	
-5	500	553	764	1049	1300	1440	1460	1356	1151	861	562	315	155	85.7	49.7	32.1	21.6	14.2	
0	499	631	918	1245	1507	1650	1660	1545	1312	986	639	356	170	91.1	51.1	32.6	21.7	14.2	
5	462	664	993	1338	1613	1735	1727	1601	1354	1014	654	363	173	90.4	51.1	32.6	21.7	14.2	
10	409	636	975	1326	1608	1731	1726	1606	1365	1014	649	358	171	88.1	50.7	32.4	21.6	14.2	
15	333	563	881	1221	1499	1635	1666	1525	1270	950	619	341	164	84.4	49.7	32.0	21.5	14.2	
20	249	452	726	1033	1288	1455	1459	1359	1144	836	537	304	151	79.4	48.3	31.4	21.3	14.2	
25	169	321	537	787	1024	1164	1207	1116	941	707	453	256	130	73.3	46.4	30.6	21.1	14.2	
30	110	204	362	553	726	855	898	855	715	543	363	212	112	66.7	44.0	29.5	20.7	14.2	
35	77.2	133	230	347	460	569	609	592	510	390	268	169	92.9	60.4	41.3	28.3	20.4	14.2	
40	54.9	84.0	132	190	276	338	382	377	334	263	190	121	78.5	53.5	38.6	26.9	20.0	14.2	
45	39.5	56.5	75.6	108	150	179	218	215	202	166	129	91.7	65.2	47.9	35.4	25.7	19.5	14.2	
50	28.7	38.0	48.0	64.9	81.3	101	117	125	120	106	87.5	70.2	55.4	42.4	32.3	24.6	19.0	14.2	
55	20.1	26.1	33.2	42.1	50.2	61.7	68.1	76.1	75.3	71.7	64.1	55.0	46.4	37.3	29.3	23.3	18.5	14.2	
60	14.1	18.3	22.9	28.6	34.7	41.0	45.8	50.4	52.1	51.8	48.7	43.9	38.6	32.2	26.3	21.9	17.9	14.2	
65	9.00	12.4	16.1	19.9	23.6	28.1	32.1	35.4	37.7	38.4	37.5	35.1	31.8	28.1	24.1	20.7	17.4	14.2	
70	4.46	7.38	10.5	13.6	16.8	19.8	22.7	25.2	27.5	28.4	28.8	27.8	26.5	24.5	21.9	19.5	16.8	14.2	
75	1.56	3.01	5.73	8.34	11.1	13.7	16.3	18.5	20.4	21.9	22.6	22.7	22.3	21.5	19.9	18.2	16.2	14.2	
80	0.10	0.21	2.12	3.87	6.37	8.75	11.1	13.2	15.1	16.9	17.9	18.7	18.9	18.8	17.9	17.0	15.6	14.2	
85	0.08	0.10	0.33	0.56	2.58	4.45	6.64	8.76	10.7	12.5	13.9	15.1	15.8	16.3	16.0	15.7	15.0	14.2	
90	0.09	0.11	0.14	0.16	0.54	0.92	2.93	4.94	6.87	8.80	10.4	11.9	12.9	13.9	14.2	14.5	14.4	14.2	

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: