

Floodlight Summary:

Report based on lamp delivering 1000 lumens.

Maximum Intensity	1840.4 cd per klm.
(Luminaire orientation as tested.)	-6.0 degrees vertical
	30.5 degrees horizontal

Beam Spread	At 10% of Imax	78.4V x 139.9H
	At 50% of Imax	37.3V x 115.5H
	At 90% of Imax	14.2V x 106.5H

Beam Flux	Total	1624.2 lumens per klm.
	To 10% of Imax	1471.1 lumens per klm.
	To 50% of Imax	872.2 lumens per klm.
	To 90% of Imax	114.7 lumens per klm.

Upward LOR	0.0 %
Downward LOR	162.4 %

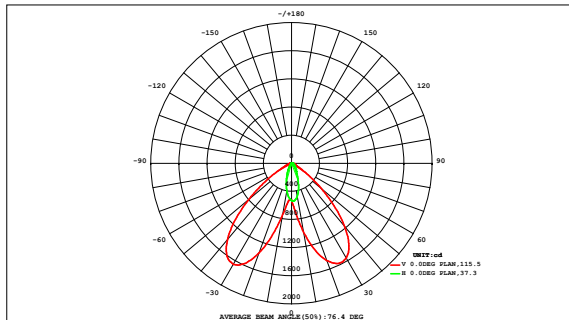
Luminaire Efficiency (Light Output Ratio)	162.4 %
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C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.3°C
Operators:
Test Date: 11 November 2022

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)	1767
NOMINAL POWER (W)	16	AVAILABILITY (%)	147.1
RATED VOLTAGE (V)	48	Avai. FLUX (lm)	1412
NOMINAL FLUX (lm)	960	LOR (%)	162.4
LAMPS INSIDE	1	TOTAL FLUX (lm)	1559
TEST VOLTAGE (V)	48	θ @50% (H,V)	116,37DEG

VERTICAL (DEG)	AREA FLUX DIAGRAM																UNIT:lm		Φ t	Φ a
	0.02	0.05	0.08	0.08	0.06	0.03	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.04	0.07	0.06	0.03	0.55	0.00
90	0.02	0.07	0.13	0.18	0.19	0.17	0.12	0.05	0.01	0.00	0.00	0.01	0.04	0.10	0.13	0.12	0.09	0.03	1.46	0.00
80	0.02	0.10	0.20	0.30	0.38	0.40	0.36	0.26	0.12	0.02	0.05	0.14	0.22	0.26	0.25	0.20	0.11	0.03	3.42	0.00
70	0.03	0.12	0.28	0.49	0.70	0.80	0.76	0.53	0.17	0.14	0.28	0.41	0.49	0.49	0.42	0.28	0.14	0.04	6.56	0.00
60	0.03	0.14	0.38	0.80	1.37	1.84	1.80	1.34	0.63	0.45	0.67	0.89	1.01	0.94	0.70	0.40	0.17	0.04	13.6	0.00
50	0.03	0.17	0.52	1.40	3.36	5.74	6.07	4.34	2.35	1.21	1.47	2.20	2.56	2.09	1.23	0.58	0.21	0.04	35.6	12.5
40	0.03	0.19	0.69	2.57	8.02	14.9	17.4	13.3	6.71	3.18	4.09	7.14	8.06	5.63	2.46	0.82	0.25	0.05	95.5	81.5
30	0.03	0.21	0.86	4.15	13.8	26.3	31.9	26.3	14.3	7.61	12.5	19.6	19.8	12.5	4.69	1.16	0.30	0.05	196	191
20	0.04	0.23	0.98	5.24	17.8	33.6	41.0	35.3	20.7	14.5	25.0	35.8	33.7	20.6	7.42	1.56	0.33	0.05	294	291
10	0.04	0.22	0.98	5.19	17.6	33.4	40.7	34.6	20.8	18.2	33.2	45.0	41.3	25.5	9.09	1.79	0.35	0.05	328	325
0	0.03	0.21	0.85	4.00	13.1	25.0	30.2	24.5	14.5	15.5	31.1	42.5	39.2	24.4	8.79	1.74	0.34	0.05	276	273
-10	0.03	0.19	0.67	2.36	7.12	13.1	15.1	11.5	7.04	9.31	20.6	30.5	29.2	18.1	6.55	1.43	0.32	0.05	173	168
-20	0.03	0.17	0.50	1.27	2.92	4.67	5.08	3.87	3.11	4.28	9.03	14.9	15.4	9.94	3.83	1.03	0.29	0.05	80.4	61.1
-30	0.03	0.14	0.36	0.73	1.19	1.52	1.58	1.52	1.55	1.94	3.06	4.80	5.47	3.97	1.89	0.73	0.25	0.05	30.8	9.92
-40	0.03	0.12	0.26	0.44	0.61	0.68	0.65	0.67	0.77	0.91	1.19	1.58	1.80	1.55	1.01	0.52	0.20	0.04	13.0	0.00
-50	0.02	0.09	0.18	0.27	0.33	0.34	0.29	0.23	0.25	0.36	0.54	0.72	0.82	0.78	0.60	0.36	0.17	0.04	6.38	0.00
-60	0.02	0.07	0.12	0.15	0.15	0.13	0.07	0.03	0.02	0.08	0.21	0.33	0.41	0.43	0.37	0.26	0.14	0.04	3.02	0.00
-70	0.02	0.05	0.06	0.06	0.04	0.01	0.00	0.00	0.00	0.00	0.03	0.09	0.17	0.22	0.22	0.18	0.11	0.03	1.28	0.00
-80	0.02	0.05	0.06	0.06	0.04	0.01	0.00	0.00	0.00	0.00	0.03	0.09	0.17	0.22	0.22	0.18	0.11	0.03	1.28	0.00
-90	0.02	0.05	0.06	0.06	0.04	0.01	0.00	0.00	0.00	0.00	0.03	0.09	0.17	0.22	0.22	0.18	0.11	0.03	1.28	0.00
HORIZONTAL (DEG)																				
Φ t	0.50	2.56	8.12	29.7	88.8	163	193	158	93.0	77.7	143	207	200	128	49.7	13.2	3.82	0.77	1559	---
Φ a	0.00	0.00	0.00	17.6	79.7	154	184	149	81.4	65.5	133	197	191	119	39.9	1.83	0.00	0.00	---	1412

one-half-peak spread: U:18.6,D:19.0 , L:28.5,R:29.7

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

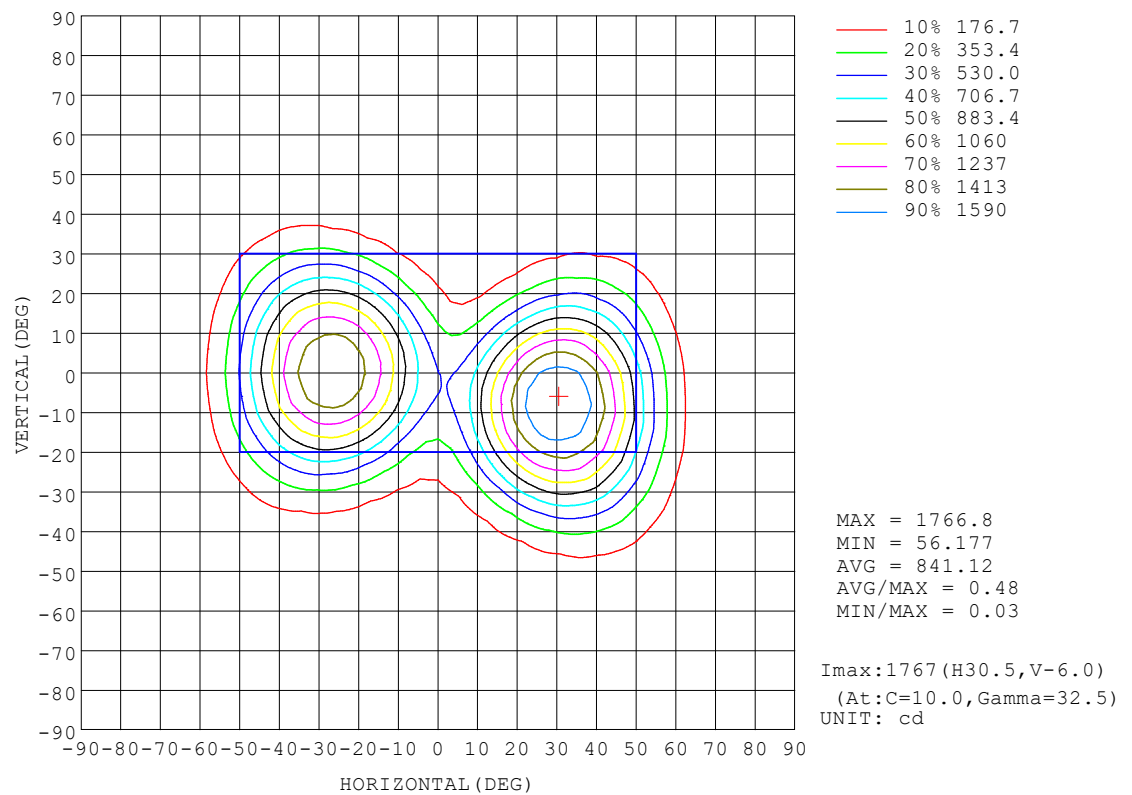
Humidity:65.0%

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:

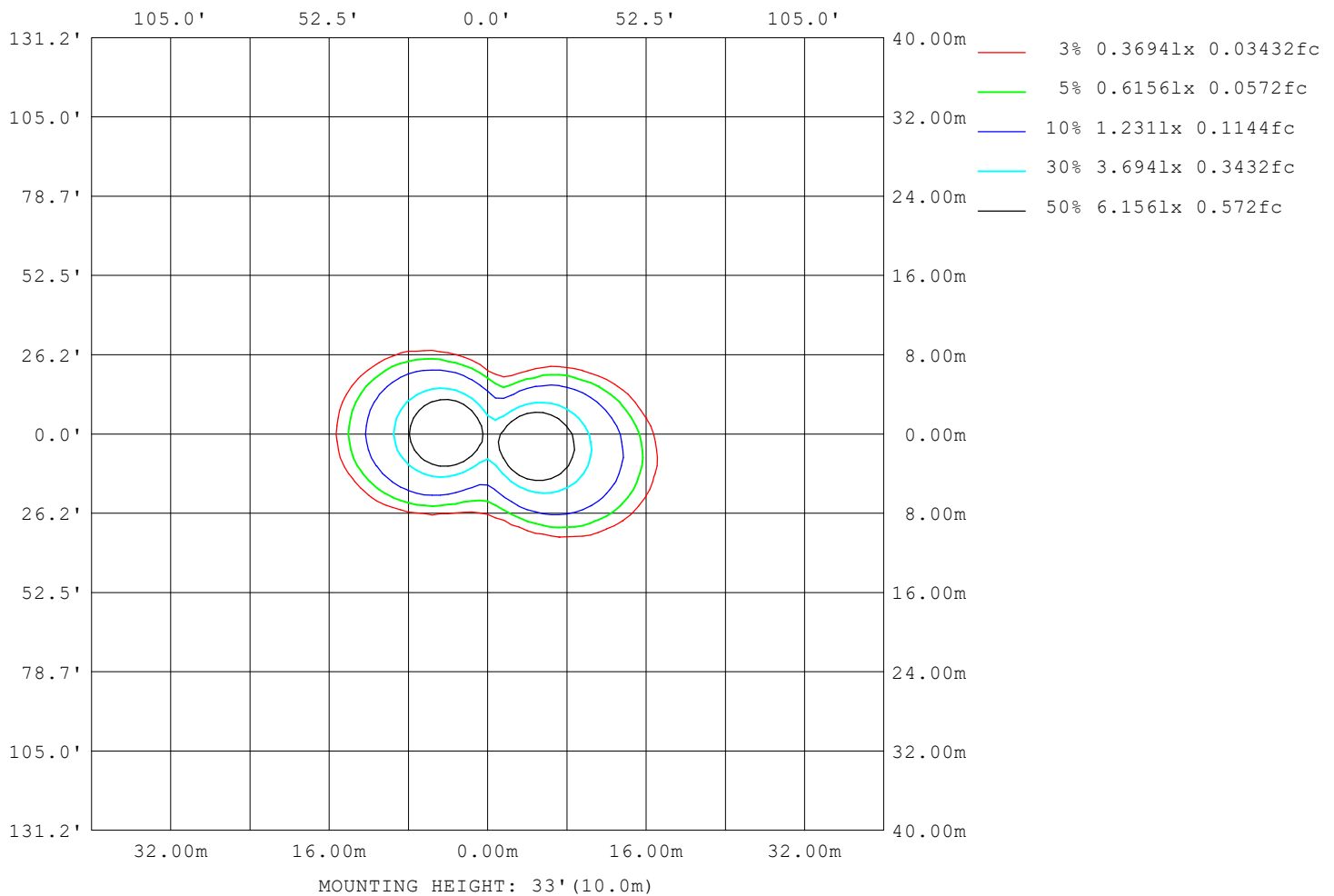


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γ Interval: 2.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.456
Humidity:65.0%
Test Distance:6.265m [K=1.0000]
Remarks:

ISOLUX DIAGRAM

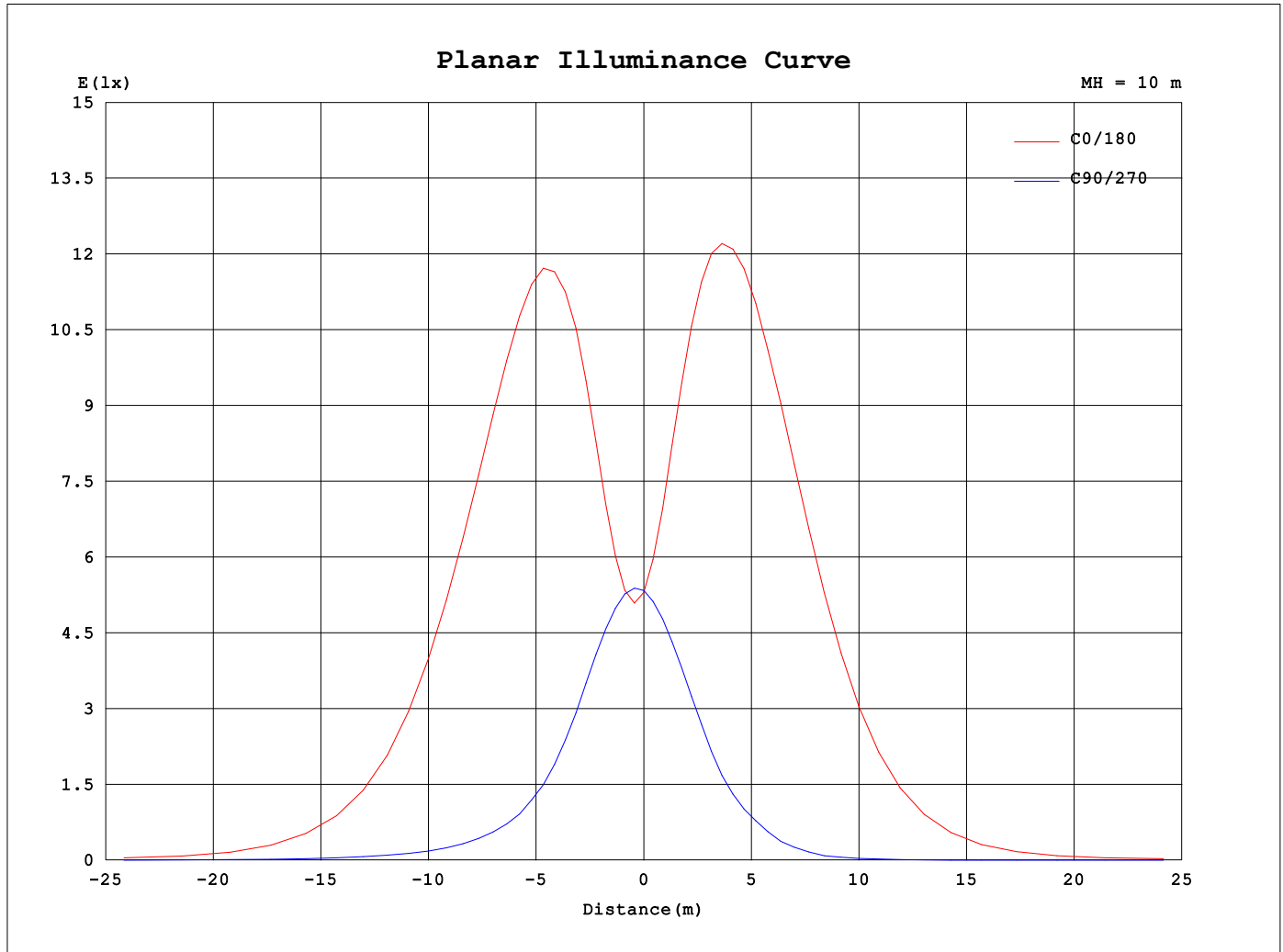
NAME: 93M20TL2030/BL	TYPE:	WEIGHT: 1
SPEC.:	DIM.: F42 x 225	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: cilinder	Shielding Angle:



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

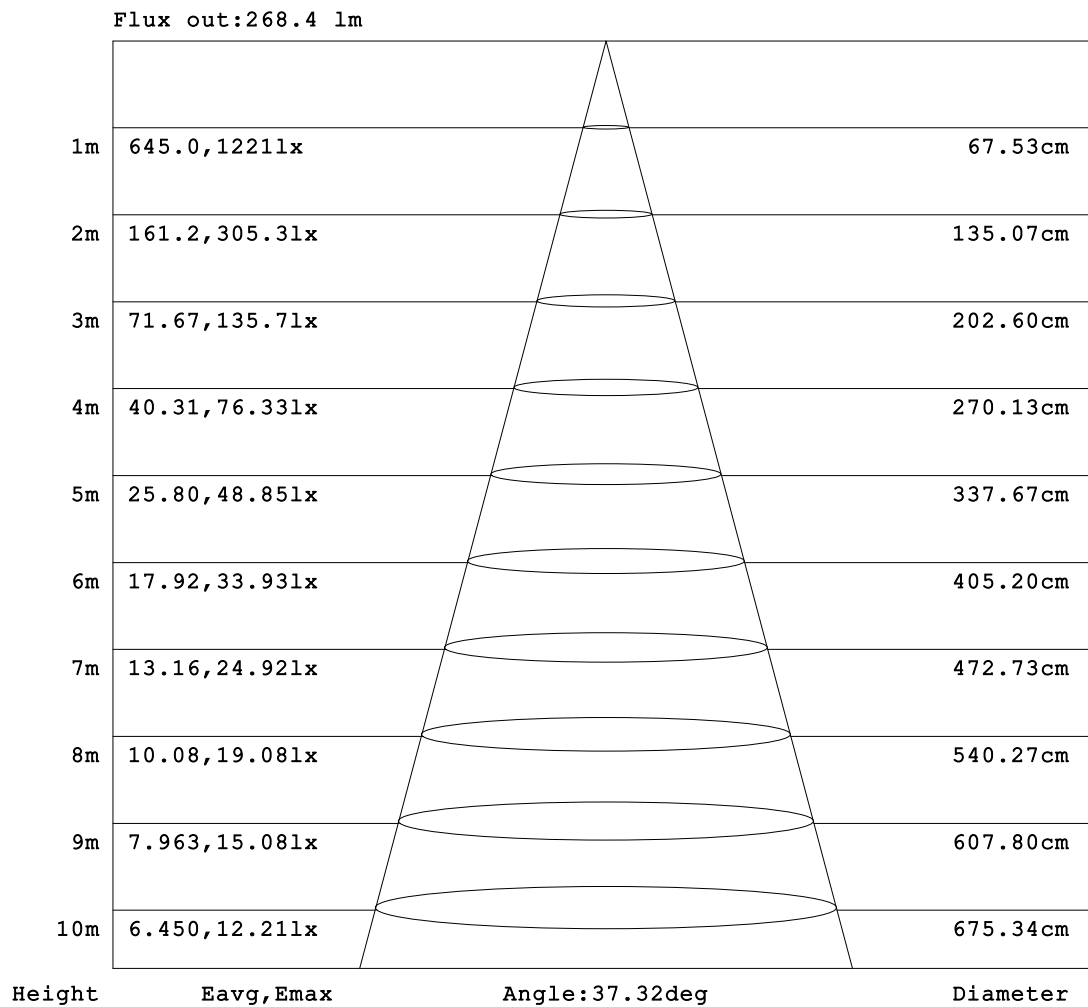


C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.3°C
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Test Date: 11 November 2022

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	6.31	6.06	5.81	5.07	4.34	3.24	2.14	1.27	0.40	0.27	0.13	0.11	0.10	0.08	0.06	0.06	0.06	0.06	0.06
-85	6.31	6.47	6.64	6.25	5.81	5.07	4.31	3.28	2.21	1.47	0.54	0.36	0.12	0.09	0.06	0.07	0.07	0.07	0.06
-80	6.31	6.89	7.46	7.44	7.41	7.04	6.53	5.82	4.95	3.91	2.75	1.87	0.75	0.46	0.11	0.09	0.09	0.08	0.06
-75	6.31	7.30	8.28	8.77	9.14	9.22	9.09	8.68	8.01	7.18	6.15	4.95	3.61	2.46	1.11	0.64	0.17	0.23	0.32
-70	6.31	7.70	9.15	10.1	11.0	11.6	11.9	11.9	11.5	10.9	9.98	8.86	7.47	6.05	4.53	3.07	1.42	2.25	3.39
-65	6.31	8.09	10.0	11.6	13.0	14.1	15.0	15.5	15.6	15.2	14.5	13.4	12.0	10.4	8.74	7.52	6.76	7.68	8.73
-60	6.31	8.46	10.8	13.0	15.0	16.9	18.4	19.6	20.4	20.3	19.9	18.8	17.5	15.6	14.0	13.7	14.4	15.8	17.2
-55	6.31	8.86	11.7	14.5	17.2	19.9	22.5	24.9	27.0	27.8	28.1	26.5	25.3	22.2	22.0	22.2	23.4	25.0	26.7
-50	6.31	9.23	12.5	16.0	19.5	23.4	27.9	32.3	35.9	38.5	39.5	39.3	37.2	34.7	34.1	33.4	34.4	35.7	37.8
-45	6.31	9.59	13.3	17.6	21.9	27.5	34.5	41.3	47.6	53.7	56.4	59.2	55.8	54.9	52.3	50.0	49.3	49.8	52.5
-40	6.31	9.91	14.1	19.0	24.6	32.7	41.7	53.0	65.5	79.8	93.1	97.7	97.9	94.0	81.3	75.9	70.7	69.2	73.4
-35	6.31	10.2	14.8	20.3	27.9	37.8	50.8	69.1	95.3	127	164	175	188	175	150	125	105	96.4	102
-30	6.31	10.5	15.5	21.6	31.2	43.5	62.0	91.5	143	213	275	324	339	327	282	219	167	137	141
-25	6.31	10.7	16.0	22.8	34.0	49.0	75.4	126	211	322	436	525	567	548	478	384	287	215	202
-20	6.31	10.9	16.5	23.9	36.4	55.4	92.0	165	295	460	632	769	845	830	744	604	451	330	287
-15	6.31	11.1	16.9	24.8	38.4	60.3	109	216	386	602	831	1025	1119	1122	1021	845	637	462	389
-10	6.31	11.2	17.2	25.5	40.0	64.3	121	251	463	741	1011	1226	1349	1367	1256	1062	815	588	479
-5	6.31	11.3	17.4	26.0	41.1	67.1	130	276	510	813	1120	1366	1503	1518	1407	1207	936	678	533
0	6.31	11.3	17.5	26.3	41.7	68.8	136	291	540	860	1179	1426	1556	1573	1472	1270	990	705	531
5	6.31	11.3	17.4	26.0	41.2	67.4	131	279	516	823	1132	1373	1508	1526	1424	1228	959	681	483
10	6.31	11.2	17.2	25.6	40.2	64.8	123	256	474	759	1038	1254	1378	1397	1296	1105	849	591	399
15	6.31	11.1	17.0	24.9	38.7	61.1	111	223	404	636	883	1082	1177	1183	1088	911	687	463	299
20	6.31	10.9	16.6	24.1	36.7	56.3	94.6	174	319	505	696	842	924	918	832	680	497	331	202
25	6.31	10.8	16.1	23.0	34.3	50.1	78.5	136	237	365	497	603	651	640	560	449	319	208	137
30	6.31	10.5	15.6	21.8	31.6	44.8	65.2	101	163	240	324	387	408	391	338	261	179	124	87.1
35	6.31	10.3	14.9	20.5	28.5	39.2	54.0	75.9	108	147	196	219	231	207	178	140	102	74.3	47.1
40	6.31	9.99	14.2	19.3	25.2	34.1	44.6	57.8	73.5	92.0	110	125	121	110	89.2	76.7	57.5	37.6	20.5
45	6.31	9.67	13.5	17.8	22.6	29.1	36.9	44.9	53.0	61.1	66.4	70.5	66.4	63.6	53.4	43.6	30.6	19.0	11.3
50	6.31	9.33	12.7	16.3	20.2	24.8	30.1	35.4	40.0	43.7	45.7	45.8	43.7	40.1	34.3	26.5	14.8	7.67	5.57
55	6.31	8.96	11.9	14.9	18.0	21.2	24.4	27.6	30.3	32.0	32.6	31.4	29.8	26.8	23.6	18.0	10.00	4.67	1.40
60	6.31	8.57	11.0	13.4	15.8	18.1	20.0	21.7	23.0	23.4	23.2	22.0	20.8	18.7	16.6	13.5	9.28	5.11	1.11
65	6.31	8.20	10.2	12.0	13.8	15.2	16.4	17.3	17.7	17.6	17.0	16.0	14.6	12.9	11.0	8.99	6.82	4.45	1.88
70	6.31	7.82	9.38	10.6	11.9	12.7	13.3	13.5	13.4	12.9	12.0	10.9	9.58	8.08	6.35	4.64	2.81	1.51	0.14
75	6.31	7.43	8.52	9.30	9.99	10.3	10.3	10.1	9.67	8.88	7.85	6.69	5.39	4.04	2.52	1.47	0.24	0.10	0.04
80	6.31	7.03	7.73	7.99	8.28	8.07	7.75	7.15	6.42	5.41	4.26	3.16	1.91	1.28	0.45	0.29	0.17	0.10	0.04
85	6.31	6.63	6.93	6.80	6.64	6.04	5.40	4.51	3.57	2.54	1.41	0.92	0.30	0.32	0.37	0.28	0.18	0.11	0.04
90	6.31	6.23	6.14	5.61	5.09	4.20	3.30	2.24	1.17	0.74	0.31	0.31	0.30	0.35	0.39	0.29	0.18	0.12	0.06

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	0.08	0.09	0.10	0.57	1.04	2.78	4.52	6.17	7.81	9.08	10.4	11.1	11.8	11.9	11.9	11.3	10.7	
-85	0.07	0.09	0.55	0.98	2.89	4.67	6.60	8.45	10.0	11.5	12.5	13.5	13.8	14.0	13.5	13.0	11.9	10.7	
-80	0.38	0.73	2.82	4.74	6.98	9.10	11.2	13.0	14.5	15.8	16.5	17.0	16.7	16.3	15.2	14.2	12.4	10.7	
-75	2.37	4.34	6.94	9.42	12.0	14.3	16.6	18.5	19.8	20.7	21.0	20.8	19.9	18.8	17.1	15.2	12.9	10.7	
-70	6.21	8.94	12.0	15.0	18.0	20.6	23.1	25.0	26.3	26.6	26.4	25.2	23.5	21.5	18.9	16.4	13.4	10.7	
-65	11.5	14.3	18.1	21.8	25.3	29.2	32.4	34.7	35.7	35.3	34.0	31.0	27.6	24.3	20.9	17.6	13.9	10.7	
-60	19.2	21.7	25.8	31.2	36.8	42.5	46.4	48.9	49.1	47.3	43.8	38.8	33.2	27.4	22.8	18.6	14.4	10.7	
-55	29.4	33.2	38.7	46.6	53.9	64.0	68.8	72.5	69.6	64.5	56.8	47.8	39.8	31.6	25.0	19.8	14.9	10.7	
-50	43.3	50.5	58.9	73.7	88.4	106	116	116	107	92.5	74.9	59.4	47.0	35.9	27.1	20.8	15.3	10.7	
-45	61.6	76.5	94.7	128	166	191	214	200	176	141	103	74.6	54.3	40.5	29.6	21.7	15.7	10.7	
-40	87.6	121	171	229	317	364	383	354	296	218	147	93.9	63.9	45.0	32.3	22.6	16.1	10.7	
-35	128	194	301	422	535	614	618	564	460	326	208	122	73.9	49.9	34.3	23.5	16.4	10.7	
-30	190	307	479	674	825	916	906	820	642	456	282	153	86.4	54.4	36.2	24.2	16.7	10.7	
-25	288	467	702	945	1132	1211	1201	1062	844	595	357	188	97.7	58.5	37.9	24.8	16.9	10.7	
-20	397	620	918	1196	1388	1480	1431	1279	1025	703	425	225	112	61.8	39.1	25.3	17.1	10.7	
-15	490	746	1080	1379	1582	1649	1616	1430	1139	799	490	251	119	63.8	40.0	25.5	17.2	10.7	
-10	557	815	1160	1472	1682	1744	1686	1511	1221	847	504	258	121	64.6	40.4	25.7	17.3	10.7	
-5	578	815	1157	1464	1678	1751	1689	1495	1191	829	495	255	119	64.4	40.5	25.7	17.3	10.7	
0	541	739	1054	1356	1574	1659	1606	1421	1130	783	468	241	114	63.2	40.1	25.5	17.2	10.7	
5	453	600	854	1128	1338	1423	1380	1215	961	668	404	212	105	60.2	38.8	25.1	17.0	10.7	
10	342	441	632	852	1034	1122	1103	979	773	539	331	178	94.7	56.6	37.1	24.5	16.8	10.7	
15	220	282	418	574	711	805	801	718	578	410	254	143	83.0	52.4	35.1	23.8	16.6	10.7	
20	142	158	233	342	448	509	533	486	397	291	186	111	70.9	47.9	33.0	23.0	16.2	10.7	
25	96.5	92.6	129	181	250	304	315	303	257	195	134	87.9	59.8	43.2	30.6	22.1	15.9	10.7	
30	61.0	56.2	73.7	101	135	158	181	166	155	129	91.4	69.5	51.7	38.6	28.1	21.1	15.5	10.7	
35	33.9	38.3	48.4	61.1	72.1	91.6	94.2	101	91.5	83.2	68.0	55.2	43.8	34.1	25.7	20.0	15.1	10.7	
40	21.6	26.1	32.3	39.2	48.5	55.3	59.2	63.1	61.2	57.2	51.9	44.3	37.1	29.7	23.7	18.9	14.6	10.7	
45	14.5	18.1	22.0	26.7	31.9	35.6	39.8	41.5	43.2	41.8	39.7	36.0	30.8	26.1	21.7	17.8	14.1	10.7	
50	8.80	12.0	15.1	18.5	21.6	24.4	27.4	29.7	30.9	31.5	30.3	28.9	25.9	22.8	19.7	16.7	13.6	10.7	
55	4.19	6.82	9.46	12.2	14.7	17.2	19.2	21.4	22.6	23.7	23.4	23.2	21.9	20.0	17.8	15.5	13.1	10.7	
60	1.50	2.32	4.73	7.06	9.33	11.6	13.5	15.4	16.9	18.0	18.6	18.8	18.4	17.4	16.0	14.4	12.5	10.7	
65	0.85	0.29	1.38	2.61	4.70	6.75	8.65	10.5	12.1	13.4	14.4	15.0	15.2	15.0	14.2	13.3	12.0	10.7	
70	0.08	0.04	0.07	0.42	1.53	2.55	4.53	6.24	7.96	9.44	10.7	11.6	12.4	12.7	12.5	12.2	11.5	10.7	
75	0.04	0.03	0.04	0.06	0.15	0.40	1.59	2.55	4.37	5.95	7.41	8.64	9.75	10.5	10.9	11.1	11.0	10.7	
80	0.04	0.04	0.04	0.04	0.05	0.08	0.24	0.36	1.80	2.83	4.49	6.01	7.38	8.59	9.37	10.1	10.5	10.7	
85	0.04	0.05	0.04	0.04	0.06	0.08	0.10	0.12	0.45	0.65	2.20	3.56	5.20	6.76	7.97	9.13	9.97	10.7	
90	0.06	0.06	0.06	0.06	0.07	0.08	0.10	0.12	0.15	0.19	0.80	1.42	3.23	5.03	6.60	8.18	9.46	10.7	

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: