

# Floodlight Summary:

Report based on lamp delivering 1000 lumens.

Maximum Intensity	429.8 cd per klm.
(Luminaire orientation as tested.)	0.0 degrees vertical
	2.0 degrees horizontal

Beam Spread	At 10% of Imax	138.5V x 147.9H
	At 50% of Imax	105.8V x 113.7H
	At 90% of Imax	49.4V x 52.9H

Beam Flux	Total	1113.3 lumens per klm.
	To 10% of Imax	1098.4 lumens per klm.
	To 50% of Imax	899.6 lumens per klm.
	To 90% of Imax	264.1 lumens per klm.

Upward LOR	0.0 %
Downward LOR	111.3 %

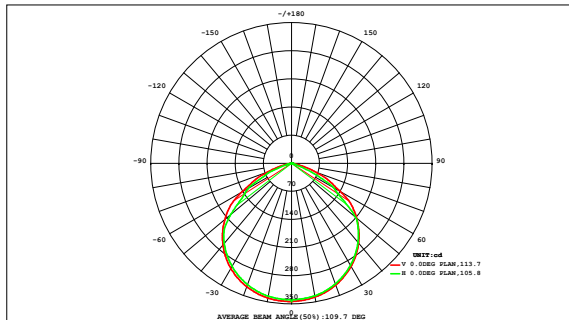
Luminaire Efficiency (Light Output Ratio)	111.3 %
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C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature: 25.3°C  
Operators:  
Test Date: 11 July 2022

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
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: 98Helios10	TYPE: 98Helios10	WEIGHT: 0.131
SPEC.:	DIM.: 0.105 x 0.065 x 0.046	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: rectangle 64x40	Shielding Angle:



DATA OF LAMP		PHOTOMETRIC DATA	
MODEL	98Helios10	Imax (cd)	343.8
NOMINAL POWER (W)	10	AVAILABILITY (%)	109.8
RATED VOLTAGE (V)	230	Avai. FLUX (lm)	878.1
NOMINAL FLUX (lm)	800	LOR (%)	111.3
LAMPS INSIDE	1	TOTAL FLUX (lm)	890.6
TEST VOLTAGE (V)	230	θ @50% (H,V)	114,106DEG

VERTICAL (DEG)	AREA FLUX DIAGRAM															UNIT:lm			Φ t	Φ a
	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.00	0.00	0.00	0.16	0.00
90	0.00	0.00	0.01	0.04	0.09	0.17	0.24	0.34	0.40	0.45	0.46	0.39	0.26	0.15	0.07	0.02	0.01	0.00	3.10	0.35
80	0.00	0.01	0.07	0.25	0.63	1.13	1.62	2.10	2.37	2.45	2.36	2.05	1.52	0.91	0.41	0.10	0.01	0.00	18.0	16.4
70	0.00	0.03	0.23	0.84	1.76	2.75	3.60	4.27	4.65	4.80	4.67	4.05	3.06	2.02	1.05	0.32	0.03	0.00	38.1	37.6
60	0.00	0.07	0.51	1.54	2.92	4.26	5.45	6.50	7.05	7.09	6.68	5.88	4.63	3.13	1.69	0.61	0.07	0.00	58.1	57.7
50	0.00	0.12	0.81	2.15	3.95	5.51	6.90	7.89	8.41	8.44	7.95	6.98	5.63	4.04	2.27	0.89	0.13	0.00	72.1	71.8
40	0.00	0.18	1.06	2.67	4.55	6.25	7.71	8.76	9.33	9.36	8.84	7.79	6.33	4.61	2.75	1.11	0.19	0.00	81.5	81.3
30	0.01	0.23	1.23	3.00	4.90	6.70	8.25	9.36	9.93	9.96	9.41	8.33	6.80	4.99	3.07	1.26	0.23	0.01	87.7	87.5
20	0.01	0.26	1.32	3.15	5.08	6.93	8.52	9.68	10.3	10.2	9.73	8.63	7.06	5.19	3.22	1.33	0.26	0.01	90.9	90.7
10	0.01	0.27	1.33	3.15	5.06	6.90	8.48	9.62	10.2	10.3	9.76	8.64	7.06	5.19	3.21	1.32	0.25	0.01	90.7	90.5
0	0.01	0.25	1.25	3.00	4.86	6.64	8.15	9.27	9.88	9.91	9.40	8.33	6.80	4.99	3.03	1.21	0.21	0.00	87.2	87.0
-10	0.01	0.20	1.10	2.70	4.48	6.16	7.61	8.67	9.25	9.27	8.76	7.75	6.31	4.60	2.66	1.02	0.16	0.00	80.7	80.5
-20	0.00	0.14	0.89	2.23	3.93	5.46	6.79	7.78	8.32	8.34	7.85	6.91	5.57	3.95	2.11	0.73	0.10	0.00	71.1	70.8
-30	0.00	0.08	0.61	1.67	3.09	4.54	5.71	6.57	7.06	7.08	6.60	5.59	4.28	2.84	1.43	0.40	0.05	0.00	57.6	57.2
-40	0.00	0.03	0.32	1.04	1.96	3.07	4.13	4.70	4.86	4.72	4.27	3.49	2.60	1.55	0.60	0.16	0.02	0.00	37.5	36.8
-50	0.00	0.01	0.09	0.39	0.77	1.25	1.75	2.07	2.12	1.99	1.68	1.18	0.74	0.36	0.13	0.04	0.01	0.00	14.6	12.0
-60	0.00	0.00	0.02	0.05	0.12	0.16	0.17	0.22	0.21	0.18	0.15	0.11	0.07	0.04	0.02	0.01	0.00	0.00	1.54	0.00
-70	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.12	0.00
-80	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.12	0.00
-90	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.12	0.00
	-90	-80	-70	-60	-50	-40	-30	-20	HORIZONTAL (DEG)	20	30	40	50	60	70	80	90			
Φ t	0.06	1.91	10.9	27.9	48.2	67.9	85.1	97.8	104	105	98.6	86.1	68.7	48.6	27.7	10.5	1.75	0.05	891	---
Φ a	0.00	0.88	10.0	27.1	47.4	67.1	84.4	97.1	104	104	97.9	85.4	68.0	47.9	27.0	9.64	0.76	0.00	---	878

one-half-peak spread: U:53.4,D:51.2 , L:58.9,R:55.2

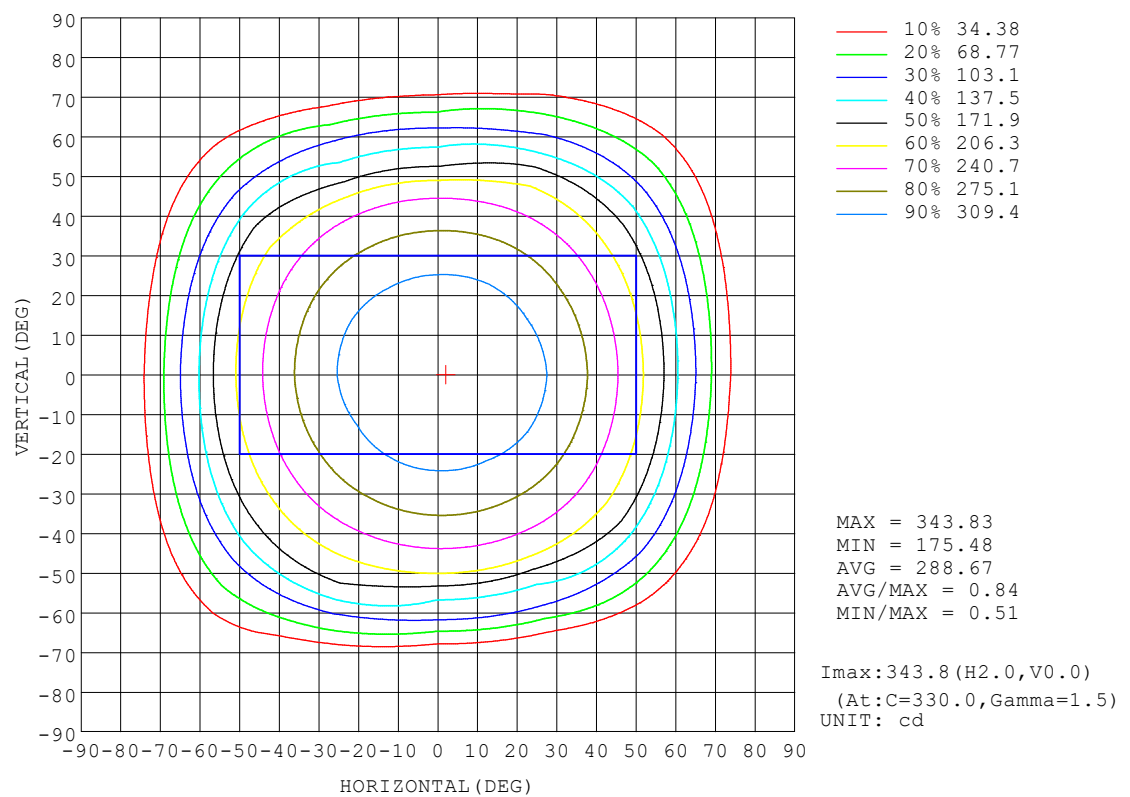
NEMA Beam Type: Type 7

C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature:25.3°C  
Operators:  
Test Date:11 July 2022

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.456  
Humidity:65.0%  
Test Distance:6.265m [K=1.0000]  
Remarks:

# ISOCANDELA DIAGRAM

NAME: 98Helios10	TYPE: 98Helios10	WEIGHT: 0.131
SPEC.:	DIM.: 0.105 x 0.065 x 0.046	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: rectangle 64x40	Shielding Angle:

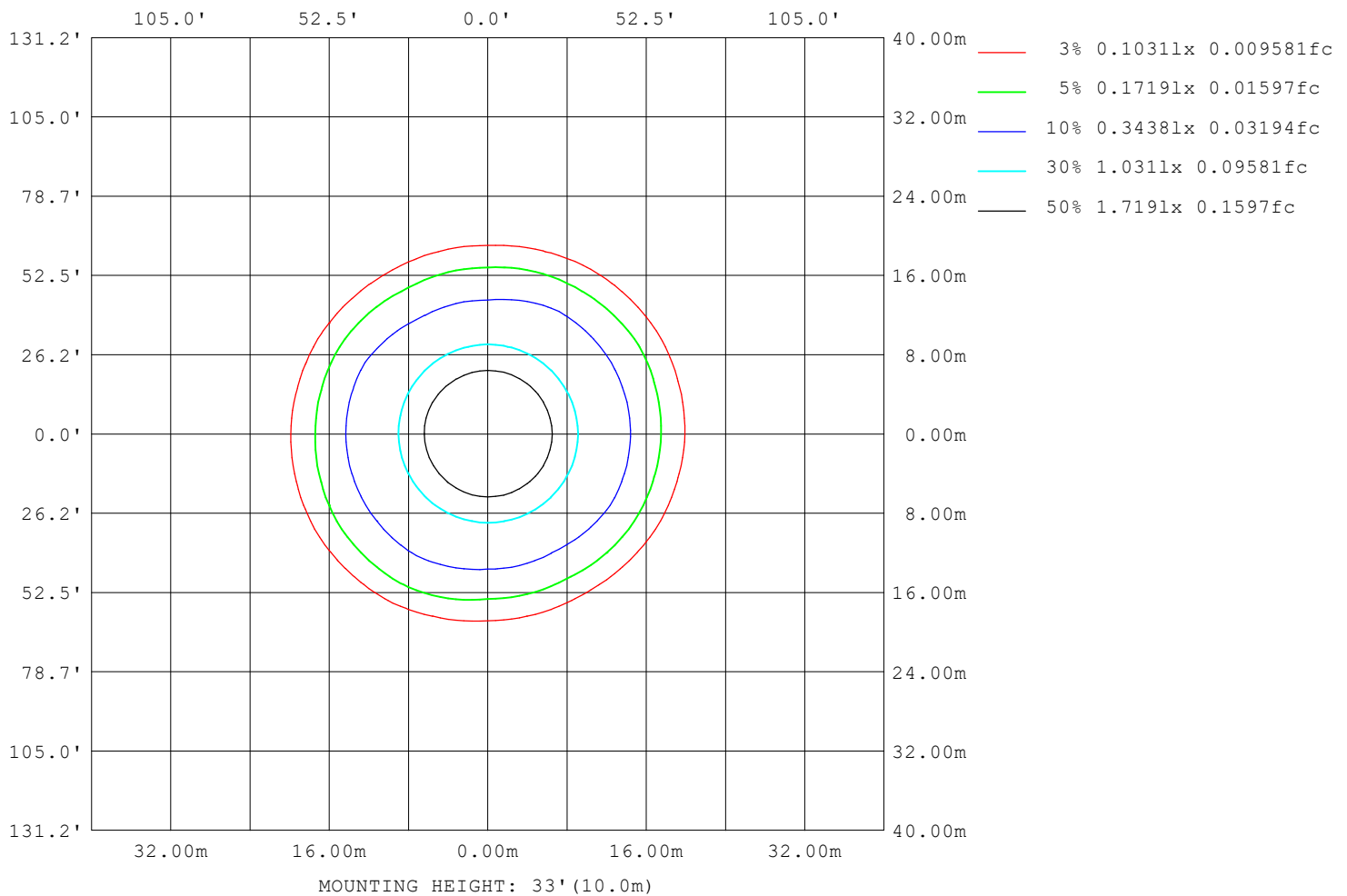


C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature:25.3°C  
Operators:  
Test Date:11 July 2022

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.456  
Humidity:65.0%  
Test Distance:6.265m [K=1.0000]  
Remarks:

## ISOLUX DIAGRAM

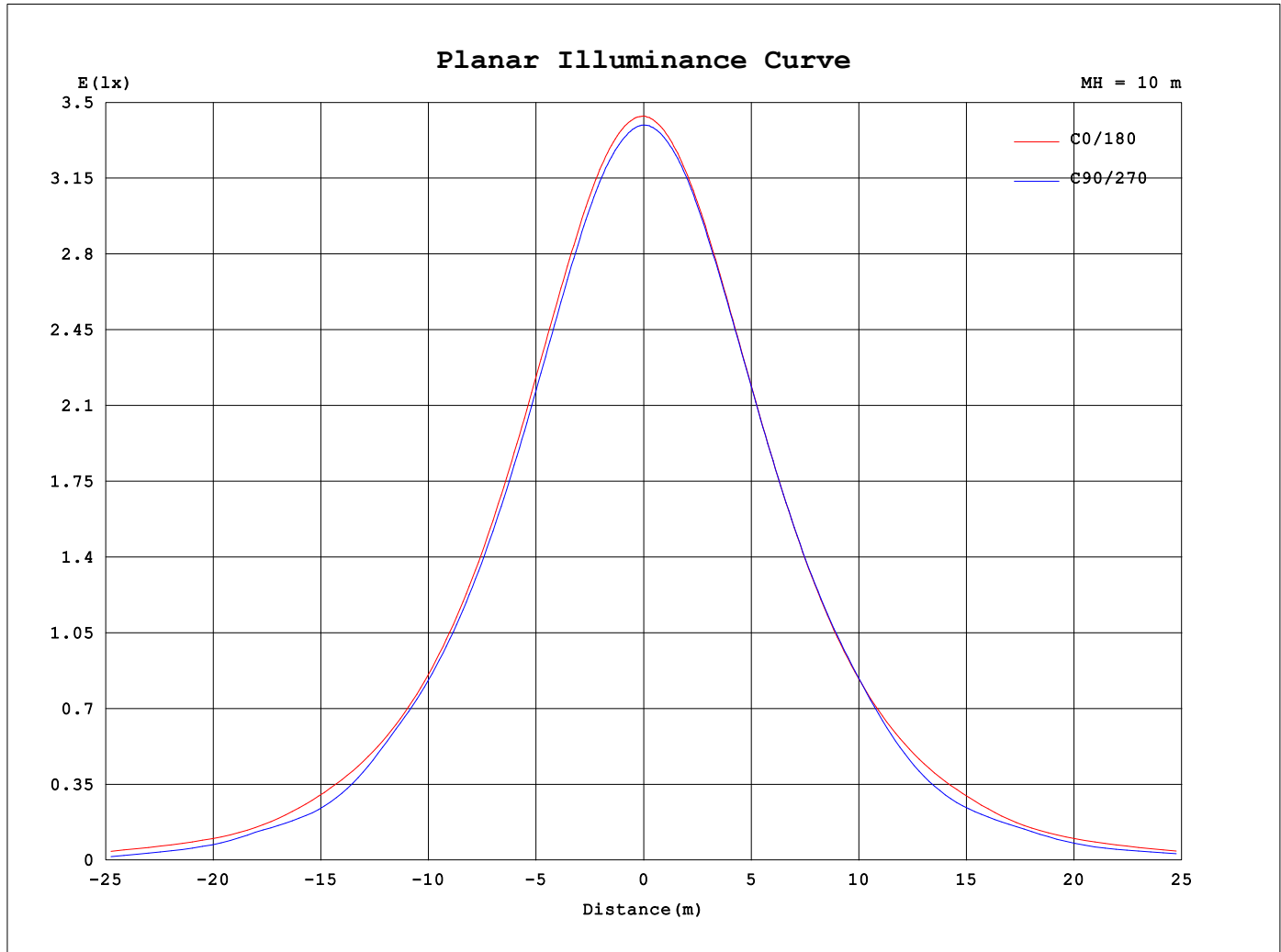
NAME: 98Helios10	TYPE: 98Helios10	WEIGHT: 0.131
SPEC.:	DIM.: 0.105 x 0.065 x 0.046	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: rectangle 64x40	Shielding Angle:



C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature: 25.3°C  
Operators:  
Test Date: 11 July 2022

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.00.456  
Humidity: 65.0%  
Test Distance: 6.265m [K=1.0000]  
Remarks:

## Planar Illuminance Curve

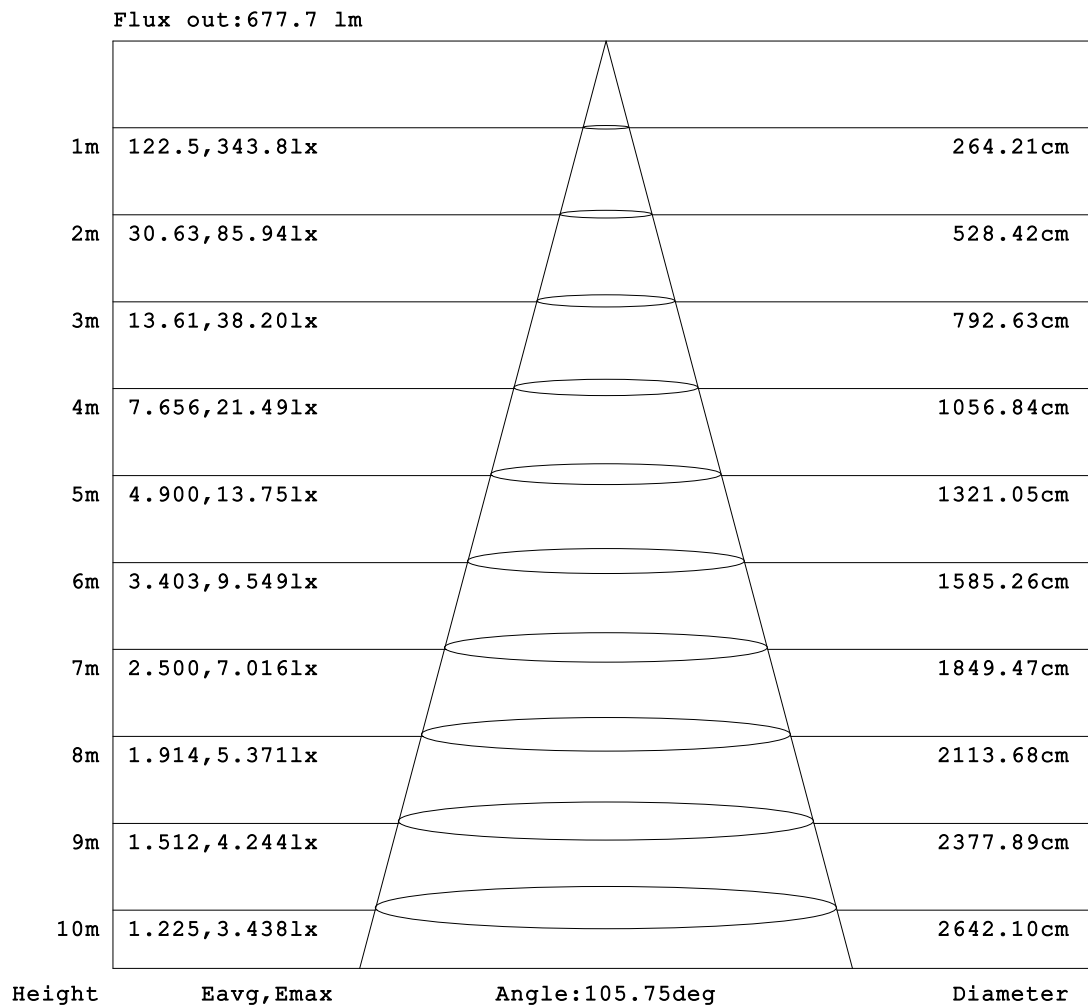


C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature: 25.3°C  
Operators:  
Test Date: 11 July 2022

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.00.456  
Humidity: 65.0%  
Test Distance: 6.265m [K=1.0000]  
Remarks:

**AAI Figure**

NAME: 98Helios10	TYPE: 98Helios10	WEIGHT: 0.131
SPEC.:	DIM.: 0.105 x 0.065 x 0.046	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: rectangle 64x40	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: 30.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3°C  
 Operators:  
 Test Date: 11 July 2022

γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 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: 98Helios10	TYPE: 98Helios10	WEIGHT: 0.131
SPEC.:	DIM.: 0.105 x 0.065 x 0.046	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: rectangle 64x40	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	0.31	0.32	0.33	0.34	0.35	0.37	0.38	0.37	0.37	0.36	0.36	0.35	0.35	0.34	0.33	0.32	0.31	0.31	0.30
-85	0.31	0.31	0.31	0.31	0.32	0.33	0.34	0.35	0.36	0.37	0.35	0.32	0.28	0.27	0.27	0.27	0.27	0.27	0.27
-80	0.31	0.30	0.30	0.34	0.45	0.59	0.74	0.88	0.98	1.03	1.01	0.91	0.70	0.75	0.80	0.81	0.79	0.72	0.62
-75	0.31	0.29	0.33	0.55	0.87	1.34	1.99	2.62	3.15	3.60	4.69	5.07	4.71	5.03	5.46	5.64	5.59	5.29	4.77
-70	0.31	0.28	0.47	0.92	1.70	2.90	4.41	7.49	12.0	15.5	17.3	17.1	16.1	18.8	22.4	23.6	22.6	20.2	16.7
-65	0.31	0.29	0.67	1.52	3.05	5.13	11.9	21.8	27.9	34.5	39.8	47.9	57.4	65.4	70.5	72.8	72.5	70.0	65.9
-60	0.31	0.32	0.92	2.37	4.72	12.3	27.4	40.7	49.3	62.8	76.8	89.1	98.6	107	115	122	125	123	120
-55	0.31	0.37	1.28	3.45	8.81	23.3	41.5	58.3	77.5	91.4	105	122	140	155	160	160	159	157	153
-50	0.31	0.44	1.69	4.60	16.0	33.7	55.2	80.8	96.9	115	139	160	174	184	190	197	202	206	207
-45	0.31	0.52	2.18	6.06	23.0	47.1	71.0	95.2	117	145	167	183	196	208	217	225	230	234	235
-40	0.31	0.59	2.71	9.53	31.1	56.2	86.4	109	141	167	186	203	217	229	238	246	252	256	257
-35	0.31	0.67	3.26	13.6	37.1	65.8	97.1	126	161	183	203	220	235	247	257	265	271	275	277
-30	0.31	0.75	3.78	17.7	45.4	76.8	107	142	174	197	217	235	250	263	273	282	288	292	293
-25	0.31	0.81	4.24	20.2	51.9	86.2	116	156	185	209	229	248	263	276	287	296	302	306	307
-20	0.31	0.88	4.64	23.8	55.6	92.9	124	166	194	218	240	258	274	288	299	307	314	318	319
-15	0.31	0.93	4.94	27.5	58.5	97.2	131	174	202	226	248	267	283	296	307	316	323	327	328
-10	0.31	0.97	5.17	29.3	60.7	100	136	179	207	232	254	273	290	303	314	323	329	333	335
-5	0.31	1.00	5.31	30.5	61.9	102	139	182	210	235	258	278	294	308	319	328	333	337	338
0	0.31	1.01	5.37	30.9	62.2	103	140	183	212	237	260	280	296	310	322	332	338	342	344
5	0.31	0.99	5.28	29.8	61.1	102	139	182	211	236	259	278	295	309	321	330	337	339	339
10	0.31	0.96	5.10	28.1	59.1	99.3	135	180	208	233	255	275	292	306	318	327	332	334	336
15	0.31	0.91	4.85	25.5	56.2	95.6	129	174	203	228	250	269	286	300	311	320	325	328	330
20	0.31	0.85	4.51	21.7	52.7	90.4	121	165	197	221	242	261	278	291	302	310	316	320	321
25	0.31	0.79	4.08	18.2	48.7	82.3	113	152	188	212	233	251	267	280	291	299	305	309	310
30	0.31	0.72	3.59	15.8	41.1	70.6	103	137	175	201	221	239	254	267	277	285	291	295	296
35	0.31	0.64	3.06	12.3	32.3	58.7	92.8	120	157	187	204	222	238	251	262	269	275	278	280
40	0.31	0.57	2.50	8.67	25.2	49.3	79.3	104	133	164	183	199	216	232	243	251	256	260	261
45	0.31	0.49	1.97	5.72	17.3	39.8	60.2	88.7	110	136	157	171	184	199	213	225	232	236	238
50	0.31	0.42	1.50	4.17	12.7	25.5	45.6	67.9	89.5	107	128	143	151	159	171	182	190	195	196
55	0.31	0.35	1.11	2.99	7.50	14.8	30.9	45.3	65.7	81.9	94.7	112	125	131	137	143	147	150	150
60	0.31	0.30	0.79	1.94	4.10	9.24	14.2	28.7	40.1	52.4	69.4	76.2	83.6	95.4	108	116	121	123	124
65	0.31	0.28	0.57	1.18	2.38	4.42	8.04	11.0	19.2	27.9	35.6	42.4	55.2	63.3	67.1	70.0	72.3	73.8	74.1
70	0.31	0.27	0.41	0.68	1.19	2.04	3.41	5.56	7.94	10.2	13.8	16.5	16.9	21.6	28.8	33.1	35.1	36.0	36.2
75	0.31	0.27	0.30	0.42	0.55	0.75	1.05	1.72	2.62	3.66	4.78	5.87	6.89	8.15	9.31	10.2	10.9	11.3	11.4
80	0.31	0.28	0.26	0.28	0.32	0.31	0.27	0.36	0.50	0.67	0.86	1.04	1.20	1.44	1.70	1.92	2.08	2.18	2.21
85	0.31	0.29	0.28	0.26	0.25	0.25	0.24	0.24	0.24	0.24	0.25	0.26	0.27	0.27	0.27	0.27	0.27	0.27	0.27
90	0.31	0.30	0.29	0.29	0.28	0.27	0.27	0.26	0.25	0.25	0.24	0.24	0.23	0.23	0.23	0.23	0.23	0.23	0.23

C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature:25.3°C  
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γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
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: 98Helios10	TYPE: 98Helios10	WEIGHT: 0.131
SPEC.:	DIM.: 0.105 x 0.065 x 0.046	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: rectangle 64x40	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	0.30	0.30	0.30	0.30	0.30	0.30	0.31	0.32	0.33	0.33	0.34	0.35	0.35	0.36	0.36	0.36	0.37	0.37	
-85	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.28	0.28	0.29	0.30	0.31	0.32	0.33	0.34	0.35	0.36	0.37	
-80	0.61	0.58	0.53	0.46	0.39	0.33	0.35	0.34	0.32	0.28	0.27	0.28	0.33	0.34	0.32	0.33	0.35	0.37	
-75	4.69	4.43	4.00	3.47	2.88	2.35	2.17	1.84	1.46	1.07	0.72	0.49	0.49	0.46	0.40	0.33	0.35	0.37	
-70	16.2	15.2	14.1	12.9	11.2	9.57	8.17	6.90	5.49	4.02	2.64	1.65	1.16	0.79	0.55	0.39	0.34	0.37	
-65	65.2	62.8	58.5	52.1	40.0	30.1	23.8	20.2	13.6	9.70	6.92	4.55	2.62	1.56	0.85	0.49	0.33	0.37	
-60	119	117	112	100	85.2	75.7	67.4	51.5	36.8	24.9	12.6	10.0	5.89	2.80	1.37	0.62	0.33	0.37	
-55	152	147	141	134	128	121	105	88.6	74.9	50.5	32.9	16.6	11.4	5.17	2.15	0.83	0.36	0.37	
-50	206	200	191	176	160	149	140	124	102	85.1	55.5	33.5	18.4	9.31	3.15	1.11	0.39	0.37	
-45	235	232	227	220	207	189	171	154	132	106	84.4	51.2	27.4	14.1	4.27	1.47	0.43	0.37	
-40	257	254	249	241	232	221	203	183	162	129	102	71.2	41.1	21.1	6.82	1.88	0.48	0.37	
-35	276	273	268	260	251	239	225	206	187	154	117	90.4	52.8	25.9	9.22	2.35	0.53	0.37	
-30	293	290	284	277	268	255	240	223	202	175	135	102	64.5	33.3	13.3	2.84	0.57	0.37	
-25	307	304	298	292	282	269	254	235	214	189	152	111	77.6	42.0	16.1	3.31	0.62	0.37	
-20	318	315	311	304	294	281	265	246	224	199	166	120	88.1	48.5	18.8	3.75	0.67	0.37	
-15	328	325	321	313	303	290	273	254	232	207	176	129	94.8	53.4	22.5	4.13	0.71	0.37	
-10	334	333	329	321	310	296	280	260	238	212	182	136	99.2	57.3	25.5	4.44	0.74	0.37	
-5	340	338	333	325	314	300	284	264	241	215	186	141	102	60.3	27.8	4.67	0.76	0.37	
0	343	340	335	327	316	302	285	266	243	217	187	143	104	62.2	29.2	4.81	0.77	0.37	
5	338	336	332	324	314	300	284	264	241	215	186	142	103	61.9	28.7	4.77	0.77	0.37	
10	335	332	327	319	309	296	280	260	238	212	183	139	101	60.4	27.3	4.64	0.76	0.37	
15	329	327	321	313	303	290	273	254	232	207	177	133	97.8	58.0	25.0	4.42	0.73	0.37	
20	321	318	313	305	294	281	265	246	224	199	170	125	93.2	54.9	21.8	4.13	0.70	0.37	
25	310	307	301	294	283	270	254	236	214	190	159	116	86.2	50.8	19.0	3.75	0.66	0.37	
30	296	293	288	280	270	257	242	223	202	179	145	107	76.3	44.2	16.1	3.32	0.61	0.37	
35	279	276	271	264	254	241	226	209	188	164	127	98.2	65.8	36.7	11.9	2.84	0.56	0.37	
40	260	257	252	245	235	223	209	191	171	144	110	86.9	55.7	30.3	8.85	2.36	0.51	0.37	
45	237	234	229	223	215	203	187	169	146	118	96.5	70.7	46.5	22.2	5.70	1.90	0.45	0.37	
50	199	199	197	194	188	174	157	138	116	98.9	80.7	55.0	33.8	14.9	4.43	1.48	0.41	0.37	
55	156	159	159	156	147	134	121	107	94.9	79.4	58.3	42.2	23.1	8.56	3.31	1.12	0.36	0.37	
60	125	124	120	114	108	102	94.6	83.6	67.3	52.6	42.6	27.0	12.5	4.79	2.28	0.82	0.33	0.37	
65	77.9	80.7	82.3	82.1	78.5	69.0	57.7	48.8	43.5	31.6	23.0	12.8	5.42	3.17	1.47	0.61	0.33	0.37	
70	38.6	40.1	40.1	38.9	37.9	36.5	30.2	22.9	18.0	13.6	8.61	4.89	3.26	1.81	0.90	0.44	0.33	0.37	
75	12.1	12.3	11.6	10.4	9.57	9.04	8.69	7.23	5.33	4.16	3.35	2.51	1.58	0.93	0.55	0.34	0.34	0.37	
80	2.41	2.53	2.54	2.44	2.24	1.99	1.85	1.70	1.53	1.36	1.18	0.96	0.68	0.46	0.33	0.32	0.35	0.37	
85	0.27	0.27	0.27	0.26	0.25	0.24	0.31	0.36	0.38	0.37	0.35	0.31	0.30	0.30	0.32	0.34	0.36	0.37	
90	0.24	0.25	0.25	0.26	0.27	0.27	0.28	0.29	0.29	0.30	0.30	0.31	0.32	0.33	0.34	0.35	0.36	0.37	

C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature:25.3°C  
Operators:  
Test Date:11 July 2022

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.456  
Humidity:65.0%  
Test Distance:6.265m [K=1.0000]  
Remarks: