

Floodlight Summary:

Report based on lamp delivering 1000 lumens.

Maximum Intensity	456.8 cd per klm.
(Luminaire orientation as tested.)	13.0 degrees vertical
	-7.5 degrees horizontal

Beam Spread	At 10% of Imax	131.3V x 131.4H
	At 50% of Imax	76.7V x 95.4H
	At 90% of Imax	40.7V x 59.7H

Beam Flux	Total	902.7 lumens per klm.
	To 10% of Imax	853.6 lumens per klm.
	To 50% of Imax	635.6 lumens per klm.
	To 90% of Imax	273.6 lumens per klm.

Upward LOR	0.0 %
Downward LOR	90.3 %

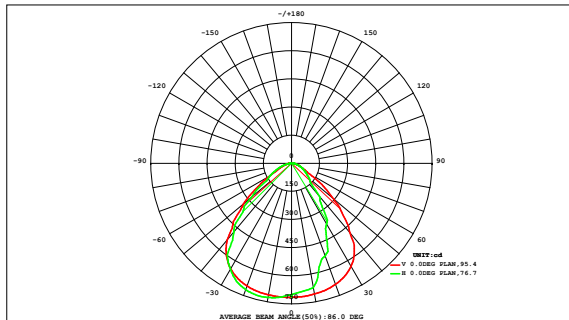
Luminaire Efficiency (Light Output Ratio)	90.2 %
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C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.3°C
Operators:
Test Date: 01 July 2022

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: 98Helios20/WH	TYPE: 98Helios20/WH	WEIGHT: 0.2
SPEC.:	DIM.: 0.338 x 0.230 x 0.145	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: rectangular	Shielding Angle:



DATA OF LAMP		PHOTOMETRIC DATA	
MODEL	98Helios20/WH	Imax (cd)	730.9
NOMINAL POWER (W)	20	AVAILABILITY (%)	85.2
RATED VOLTAGE (V)	230	Avai. FLUX (lm)	1363
NOMINAL FLUX (lm)	1600	LOR (%)	90.2
LAMPS INSIDE	1	TOTAL FLUX (lm)	1444
TEST VOLTAGE (V)	230	θ @50% (H,V)	95,77DEG

VERTICAL (DEG)	AREA FLUX DIAGRAM																UNIT:lm				Φ t	Φ a										
	0.02	0.07	0.12	0.17	0.22	0.27	0.32	0.35	0.37	0.38	0.36	0.33	0.29	0.24	0.19	0.13	0.08	0.03														
90	0.02	0.07	0.12	0.17	0.22	0.27	0.32	0.35	0.37	0.38	0.36	0.33	0.29	0.24	0.19	0.13	0.08	0.03	3.93	0.00												
80	0.02	0.08	0.16	0.30	0.51	0.76	1.02	1.22	1.35	1.36	1.27	1.09	0.85	0.60	0.38	0.21	0.10	0.03	11.3	0.00												
70	0.03	0.10	0.27	0.59	1.06	1.66	2.27	2.72	2.97	3.00	2.80	2.40	1.81	1.20	0.69	0.34	0.13	0.03	24.1	15.9												
60	0.03	0.13	0.41	0.94	1.81	3.09	4.43	5.29	5.70	5.75	5.43	4.70	3.39	2.04	1.07	0.49	0.17	0.03	44.9	41.3												
50	0.03	0.17	0.56	1.35	3.23	6.36	9.39	11.0	11.6	11.7	11.1	9.74	6.94	3.81	1.56	0.65	0.21	0.04	89.4	87.1												
40	0.03	0.20	0.70	1.93	5.52	10.5	14.6	16.7	17.5	17.5	16.8	14.9	11.2	6.27	2.33	0.80	0.25	0.04	138	136												
30	0.03	0.23	0.82	2.65	7.44	13.4	17.9	20.1	21.0	20.9	20.1	18.1	14.0	8.19	3.26	0.94	0.28	0.04	169	168												
-30	0.03	0.25	0.91	3.24	8.42	14.7	18.9	21.2	22.0	21.9	21.1	19.0	15.1	9.15	3.84	1.05	0.30	0.04	181	180												
	0.03	0.26	0.94	3.48	8.61	14.7	18.7	20.9	21.8	21.7	20.9	18.8	15.1	9.37	4.08	1.11	0.32	0.05	181	180												
	0.03	0.26	0.92	3.30	8.22	13.9	17.7	19.8	20.7	21.0	20.2	18.2	14.7	9.11	3.95	1.09	0.31	0.05	173	172												
	0.03	0.25	0.85	2.74	6.90	11.5	14.9	16.8	17.6	17.8	17.2	15.6	12.4	7.79	3.42	0.99	0.30	0.04	147	146												
	0.03	0.22	0.74	2.03	5.01	8.55	11.2	12.7	13.5	13.6	13.1	11.8	9.37	5.76	2.51	0.86	0.27	0.04	111	110												
	0.03	0.20	0.62	1.46	3.18	5.43	7.31	8.38	9.00	9.11	8.72	7.83	6.07	3.83	1.71	0.71	0.24	0.04	73.9	71.5												
	0.03	0.16	0.49	1.06	1.90	2.88	3.77	4.50	4.70	4.77	4.70	4.07	3.21	2.16	1.19	0.57	0.20	0.04	40.4	36.9												
	0.03	0.13	0.37	0.76	1.28	1.85	2.37	2.76	2.97	3.00	2.84	2.48	1.98	1.40	0.85	0.43	0.17	0.03	25.7	19.0												
	0.03	0.10	0.25	0.50	0.82	1.17	1.49	1.75	1.89	1.91	1.80	1.57	1.26	0.90	0.57	0.31	0.13	0.03	16.5	1.29												
	0.03	0.08	0.16	0.28	0.44	0.61	0.76	0.89	0.97	0.98	0.92	0.81	0.66	0.49	0.34	0.20	0.10	0.03	8.73	0.00												
-80	0.03	0.08	0.13	0.18	0.23	0.27	0.31	0.35	0.36	0.36	0.35	0.32	0.29	0.24	0.19	0.14	0.08	0.03	3.94	0.00												
-90	-90	-80	-70	-60	-50	-40	-30	-20	HORIZONTAL (DEG)																20	30	40	50	60	70	80	90
Φ t	0.53	2.98	9.42	27.0	64.8	112	147	167	176	177	170	152	119	72.6	32.1	11.0	3.64	0.65	1444	---												
Φ a	0.00	0.00	2.22	21.5	59.7	107	143	163	171	172	165	147	114	67.7	26.9	4.12	0.00	0.00	---	1363												

one-half-peak spread: U:32.2,D:33.1 , L:49.7,R:46.2

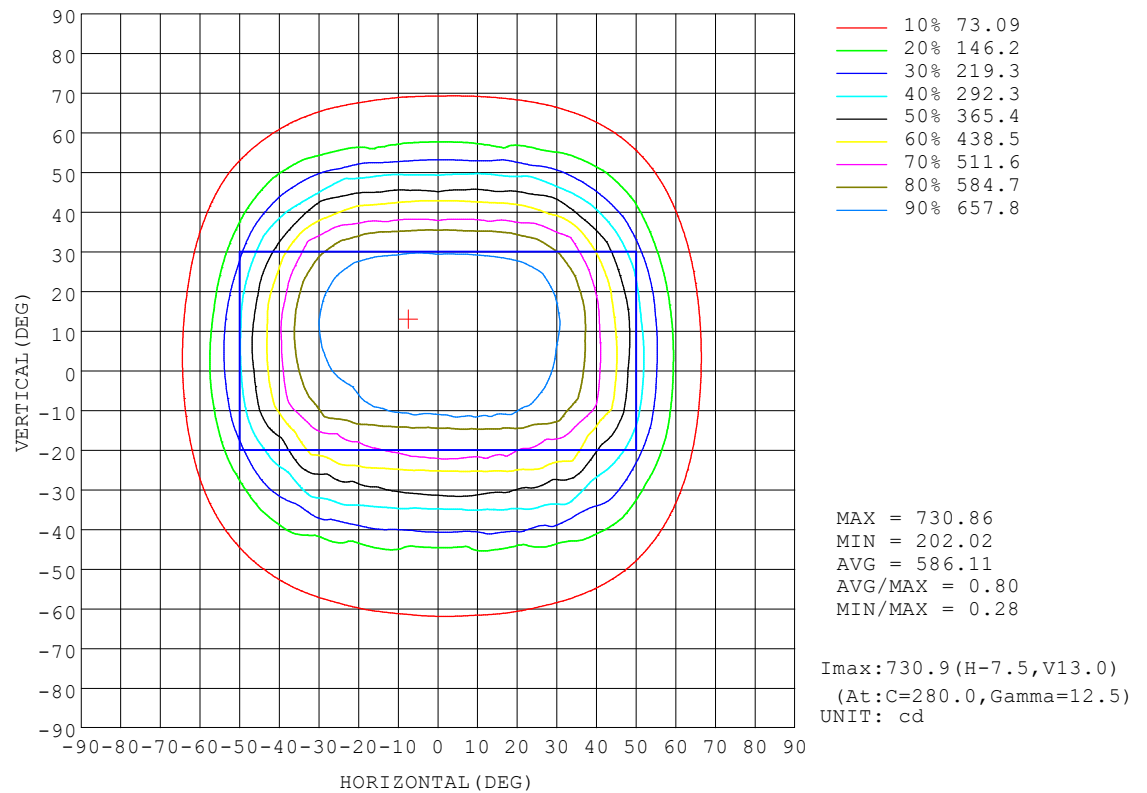
NEMA Beam Type: Type 7

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:
Test Date:01 July 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: 98Helios20/WH	TYPE: 98Helios20/WH	WEIGHT: 0.2
SPEC.:	DIM.: 0.338 x 0.230 x 0.145	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: rectangular	Shielding Angle:

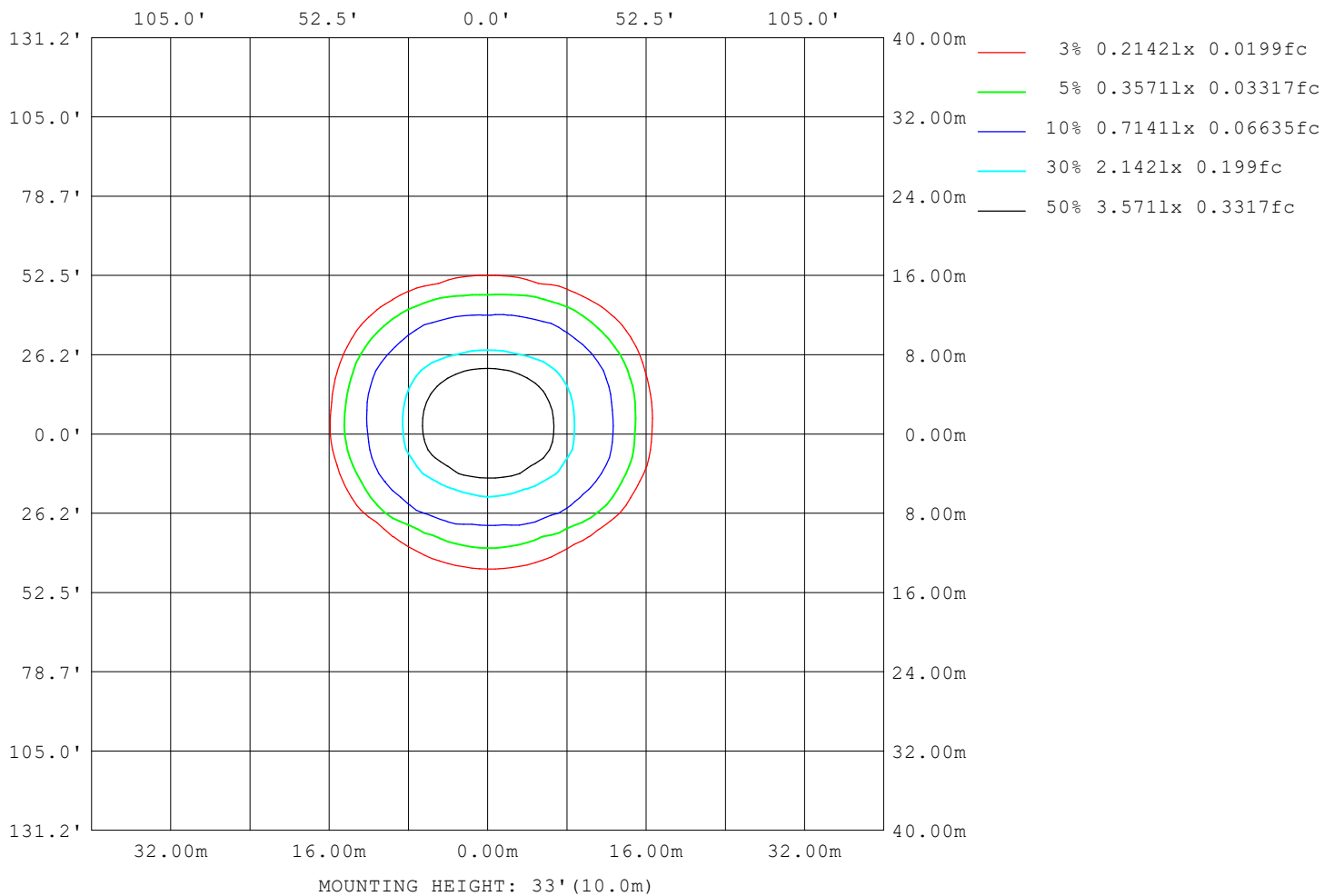


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Temperature:25.3°C
Operators:
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γ Interval: 2.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.456
Humidity:65.0%
Test Distance:6.265m [K=1.0000]
Remarks:

ISOLUX DIAGRAM

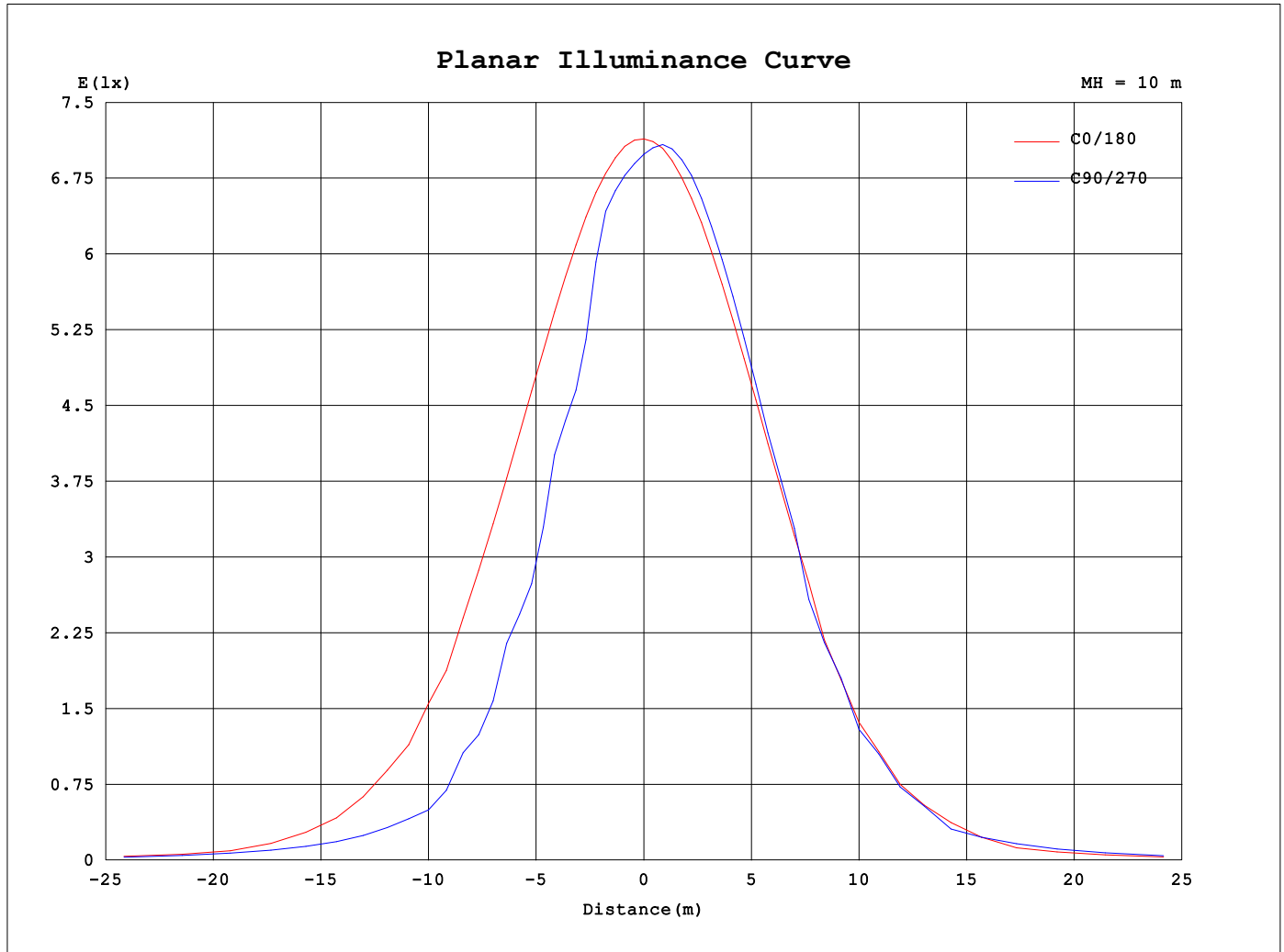
NAME: 98Helios20/WH	TYPE: 98Helios20/WH	WEIGHT: 0.2
SPEC.:	DIM.: 0.338 x 0.230 x 0.145	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: rectangular	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 10.0DEG
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Temperature: 25.3°C
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γ Range: 0 - 90DEG
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Test System: EVERFINE GO-2000A_V1 SYSTEM V2.00.456
Humidity: 65.0%
Test Distance: 6.265m [K=1.0000]
Remarks:

Planar Illuminance Curve

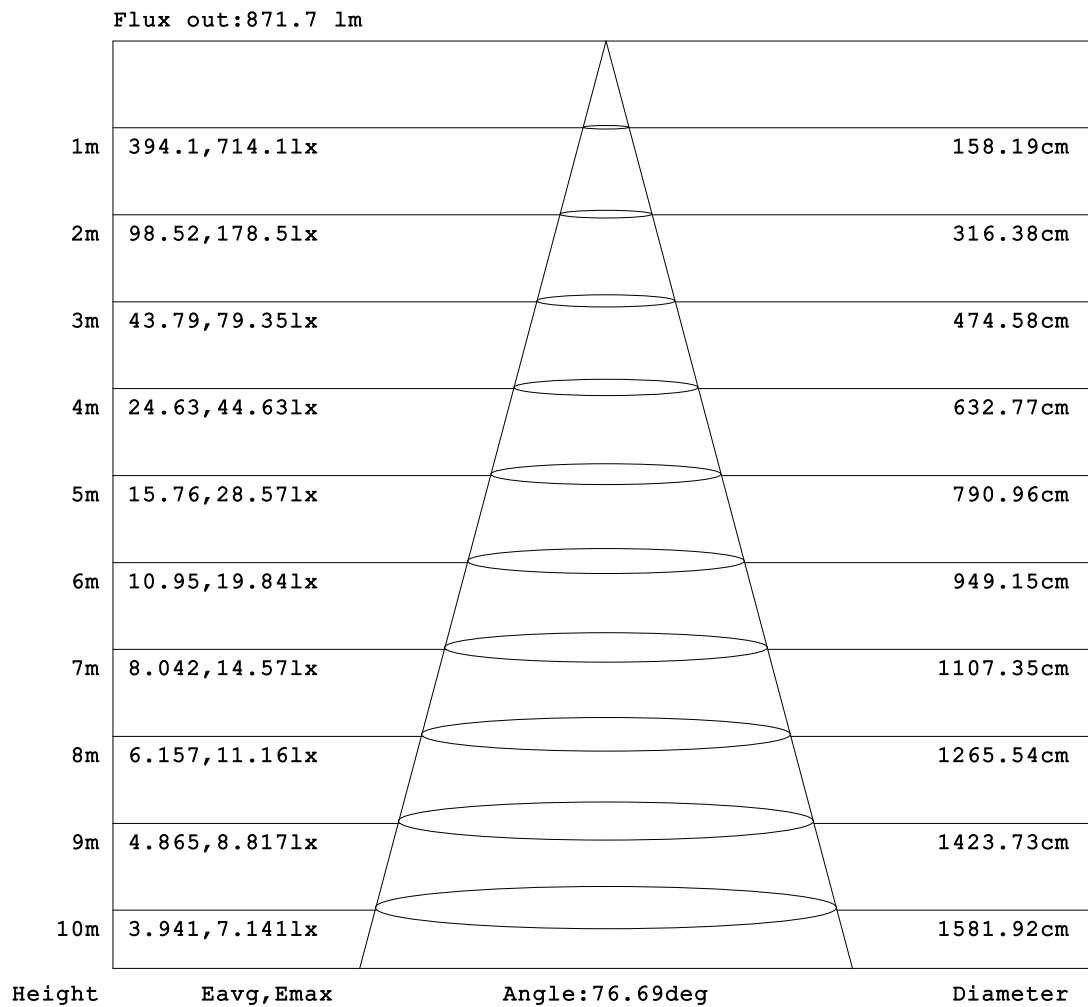


C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature: 25.3°C
 Operators:
 Test Date: 01 July 2022

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: 98Helios20/WH	TYPE: 98Helios20/WH	WEIGHT: 0.2
SPEC.:	DIM.: 0.338 x 0.230 x 0.145	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: rectangular	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:01 July 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: 98Helios20/WH	TYPE: 98Helios20/WH	WEIGHT: 0.2
SPEC.:	DIM.: 0.338 x 0.230 x 0.145	SERIAL No.: 0
MFR.: Elmark Industries JSC	SUR.: rectangular	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	9.41	9.68	9.96	9.97	9.99	9.97	9.95	9.95	9.95	9.95	9.95	9.93	9.91	9.95	9.99	9.97	9.94	9.93	9.92
-85	9.41	9.68	9.95	9.96	9.97	9.95	9.93	10.1	10.2	10.2	10.3	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2
-80	9.41	9.67	9.94	9.99	10.3	10.6	10.8	11.7	12.4	13.2	14.0	15.0	15.7	16.5	17.2	17.6	17.9	18.3	18.5
-75	9.41	9.66	9.96	10.5	11.0	12.4	13.7	15.8	17.8	19.9	22.1	24.0	25.7	27.5	29.0	30.1	31.0	31.7	32.0
-70	9.41	9.65	10.3	11.1	13.0	15.4	18.4	21.8	25.2	28.6	31.9	35.0	37.8	40.4	42.7	44.5	45.8	46.8	47.4
-65	9.41	9.64	10.6	12.5	15.4	19.1	23.7	28.3	33.0	37.7	42.4	46.6	50.5	53.9	57.0	59.3	61.0	62.2	62.9
-60	9.41	9.63	10.9	13.8	18.0	23.3	29.3	35.3	41.6	47.8	53.9	59.6	64.5	68.7	72.6	75.5	77.3	78.9	79.8
-55	9.41	9.77	11.7	15.7	21.2	27.9	35.2	42.8	50.9	59.0	66.8	74.0	80.1	85.2	89.9	93.5	95.7	97.4	98.5
-50	9.41	9.89	12.5	17.5	24.4	32.6	41.4	50.9	61.1	71.2	81.7	90.6	99.1	105	111	115	118	121	122
-45	9.41	10.0	13.2	19.4	27.9	37.3	47.9	59.8	72.1	86.8	97.5	112	119	128	132	143	146	140	141
-40	9.41	10.1	13.9	21.4	31.2	42.2	54.4	69.4	87.0	112	133	158	181	195	207	219	220	230	237
-35	9.41	10.2	14.8	23.2	34.5	46.9	62.1	80.0	110	144	185	207	251	257	270	279	286	286	287
-30	9.41	10.3	15.6	25.1	37.4	51.7	69.2	93.5	135	188	236	280	319	341	351	361	368	371	375
-25	9.41	10.3	16.3	26.8	40.2	55.9	76.3	111	164	239	283	346	382	407	417	429	436	441	443
-20	9.41	10.4	16.8	28.3	42.8	60.0	82.9	130	202	278	337	414	455	483	498	510	517	521	525
-15	9.41	10.4	17.2	29.5	44.9	63.5	88.1	152	237	322	384	458	516	530	554	563	568	573	572
-10	9.41	10.4	17.6	30.4	46.5	66.3	92.8	172	260	365	446	524	582	623	638	652	662	666	673
-5	9.41	10.4	17.7	31.0	47.6	68.3	96.5	188	274	381	476	567	612	641	661	672	680	684	686
0	9.41	10.4	17.8	31.3	48.2	69.4	99.0	198	283	387	485	585	635	667	687	700	708	713	714
5	9.41	10.4	17.7	31.2	48.3	69.7	99.7	200	288	397	499	597	649	680	701	713	720	722	717
10	9.41	10.4	17.5	30.8	47.8	69.1	98.9	194	288	398	502	601	656	691	711	723	727	728	726
15	9.41	10.3	17.2	30.1	46.7	67.5	96.5	180	284	390	490	598	654	690	711	723	729	728	727
20	9.41	10.3	16.7	28.9	45.0	64.9	93.2	162	269	370	478	581	641	679	702	714	717	718	717
25	9.41	10.2	16.1	27.5	42.7	61.5	88.0	142	238	347	444	548	613	654	678	689	693	695	694
30	9.41	10.1	15.4	25.6	39.9	57.7	80.7	118	205	308	403	496	571	610	634	645	649	654	651
35	9.41	10.0	14.6	23.6	37.0	52.9	73.0	103	165	263	334	425	492	546	567	583	588	596	598
40	9.41	9.91	13.6	21.7	33.5	47.9	65.1	87.9	129	194	274	332	404	437	459	472	477	479	480
45	9.41	9.79	12.8	19.5	29.9	42.3	57.4	76.0	97.3	146	197	261	291	341	361	366	376	371	366
50	9.41	9.66	12.0	17.4	25.8	36.8	49.2	64.6	82.0	106	143	172	212	241	261	265	280	279	273
55	9.41	9.52	11.2	15.4	22.2	31.1	41.2	52.8	67.0	82.0	99.7	118	138	155	161	172	174	170	164
60	9.41	9.37	10.3	13.4	18.4	25.3	33.5	42.6	52.9	64.4	76.3	89.0	101	111	119	125	129	132	132
65	9.41	9.38	10.0	12.0	15.3	20.0	26.1	33.1	40.7	48.6	57.6	66.4	74.3	81.3	87.3	92.0	95.6	97.4	97.8
70	9.41	9.38	9.72	10.5	12.7	15.6	19.4	24.4	29.7	35.3	40.7	46.5	51.9	56.8	60.8	64.3	67.0	68.3	68.8
75	9.41	9.38	9.39	9.89	10.5	12.2	13.9	16.8	20.0	23.4	26.9	30.2	33.6	36.5	39.0	41.2	43.1	44.1	44.5
80	9.41	9.38	9.36	9.37	9.70	10.0	10.3	11.4	12.6	13.7	15.0	16.6	18.2	19.4	20.4	21.4	22.2	22.6	22.8
85	9.41	9.39	9.37	9.35	9.33	9.33	9.34	9.46	9.57	9.65	9.68	9.67	9.64	9.65	9.65	9.66	9.66	9.67	9.68
90	9.41	9.39	9.37	9.36	9.34	9.34	9.34	9.31	9.28	9.27	9.26	9.24	9.21	9.23	9.26	9.26	9.26	9.24	9.22

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MFR.: Elmark Industries JSC	SUR.: rectangular	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	9.92	9.91	9.92	9.92	9.92	9.93	9.96	10.00	9.97	9.94	9.98	10.0	10.0	10.0	10.0	10.0	10.0	10.0	
-85	10.2	10.3	10.3	10.4	10.4	10.4	10.6	10.7	10.7	10.6	10.5	10.4	10.5	10.5	10.5	10.4	10.2	10.0	
-80	18.4	18.2	18.1	17.8	17.4	16.8	16.3	15.6	15.0	14.3	13.6	12.7	12.2	11.6	10.9	10.7	10.4	10.0	
-75	31.9	31.5	31.0	30.2	28.9	27.4	25.9	24.4	22.5	20.7	19.0	17.1	15.3	13.5	12.3	11.1	10.5	10.0	
-70	47.2	46.7	45.9	44.6	42.7	40.3	37.9	35.0	31.8	28.6	25.6	22.5	19.3	16.5	13.8	12.0	10.7	10.0	
-65	62.9	62.2	61.2	59.4	56.8	53.8	50.3	46.3	41.7	37.2	32.6	28.1	23.6	19.6	15.9	12.9	10.9	10.0	
-60	79.6	78.8	77.7	75.4	72.1	68.4	63.9	58.4	52.5	46.3	40.1	34.0	28.2	22.9	17.9	13.8	11.0	10.0	
-55	98.3	97.4	96.0	93.2	89.1	84.6	79.0	72.4	64.7	56.4	48.3	40.5	33.0	26.4	20.2	15.0	11.4	10.0	
-50	122	121	119	115	110	105	97.2	87.9	78.5	67.7	57.1	47.3	38.0	29.8	22.5	16.2	11.8	10.0	
-45	141	150	147	139	140	126	127	106	101	81.4	67.0	54.3	43.3	33.5	24.8	17.3	12.2	10.0	
-40	233	228	231	224	210	203	176	160	129	106	78.2	61.6	48.7	37.1	27.1	18.4	12.5	10.0	
-35	291	296	294	287	282	273	239	211	181	132	92.4	70.4	54.0	40.8	29.1	19.6	12.8	10.0	
-30	375	374	370	365	359	335	315	260	226	167	114	78.9	59.3	44.1	31.2	20.7	13.0	10.0	
-25	447	447	445	439	435	407	389	314	271	206	140	86.9	64.1	47.2	33.0	21.6	13.3	10.0	
-20	525	525	521	513	504	477	450	370	317	243	167	98.8	69.4	50.0	34.6	22.4	13.5	10.0	
-15	579	580	579	575	556	546	495	424	361	282	193	113	73.6	52.3	35.9	23.0	13.6	10.0	
-10	674	673	669	659	644	613	559	491	412	315	208	124	76.7	54.0	36.9	23.5	13.7	10.0	
-5	692	693	688	680	663	637	595	525	431	330	218	131	78.8	55.2	37.6	23.8	13.8	10.0	
0	715	712	707	696	678	651	606	534	439	335	223	134	79.8	55.9	37.9	23.9	13.8	10.0	
5	717	715	710	701	684	656	611	540	443	340	225	135	80.1	55.8	37.8	23.8	13.7	10.0	
10	725	724	720	711	693	662	613	534	435	334	223	132	79.3	55.2	37.3	23.5	13.7	10.0	
15	725	725	722	713	695	661	612	524	423	319	216	123	77.5	53.9	36.5	23.0	13.5	10.0	
20	716	714	712	703	683	650	597	506	409	301	203	110	74.6	52.0	35.3	22.4	13.4	10.0	
25	694	691	687	679	661	625	572	476	379	285	181	98.2	70.7	49.4	33.7	21.6	13.1	10.0	
30	652	649	645	636	617	585	523	434	342	248	153	91.7	65.9	46.4	31.8	20.6	12.9	10.0	
35	596	589	586	574	558	510	469	369	291	203	121	83.7	60.4	43.3	29.7	19.5	12.6	10.0	
40	479	478	475	465	450	423	361	301	228	162	102	73.5	55.0	39.7	27.6	18.2	12.3	10.0	
45	373	380	370	370	351	319	279	222	177	121	85.1	65.1	49.1	36.0	25.3	17.0	11.9	10.0	
50	282	284	272	271	250	229	196	166	123	91.5	72.2	56.5	43.3	31.9	22.9	15.9	11.5	10.0	
55	174	180	177	170	167	147	127	111	93.1	74.7	60.2	47.9	37.3	28.1	20.4	14.6	11.1	10.0	
60	133	131	127	122	116	107	96.0	83.9	71.9	60.1	49.2	39.7	31.3	24.1	17.8	13.3	10.7	10.0	
65	98.2	97.2	94.7	91.0	86.1	79.9	72.1	63.9	55.2	47.0	39.1	31.9	25.8	20.3	15.7	12.3	10.5	10.0	
70	69.1	68.5	66.9	64.3	60.9	56.6	51.7	46.2	40.7	35.1	29.8	24.9	20.6	16.8	13.4	11.4	10.4	10.0	
75	44.6	44.1	42.8	41.0	39.0	36.5	33.6	30.6	27.5	24.6	21.4	18.4	15.9	13.4	11.8	10.4	10.2	10.0	
80	22.9	22.8	22.2	21.4	20.7	19.7	18.7	17.5	16.6	15.6	14.2	12.9	12.1	11.3	10.3	10.0	10.0	10.0	
85	9.75	9.82	9.86	9.89	9.96	10.0	10.2	10.3	10.3	10.2	10.0	9.73	9.83	9.87	9.80	9.71	9.88	10.0	
90	9.23	9.23	9.22	9.22	9.22	9.23	9.25	9.26	9.27	9.28	9.32	9.35	9.36	9.36	9.37	9.38	9.71	10.0	

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:
Test Date:01 July 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: