

Scaled data based on original data using  
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

Brand: HALO

Report Number: P886602

Luminaire Tested: ML310LSFL95FS1E-TIR4D40FL-TL3SDMW-850LM-2700K

Issue Date: 7/5/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P886602  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2402-314-16)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 7/5/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO  
Catalog Number: ML310LSFL95FS1E-TIR4D40FL-TL3SDMW-850LM-2700K  
Description: 3IN SQUARE ML FLEX, SELECTABLE CCT, WITH 40D TIR, MATTE WHITE TRIM  
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 2700K CCT  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1154.2 lumens  
Efficiency: N/A  
Efficacy: 84.9 lumens/watt  
Spacing Criteria (0/90/45): 0.69 / 0.68 / 0.65  
Luminous Opening: Rectangular (W 0.25' x L: 0.25' x H: 0')  
CIE Type: Direct

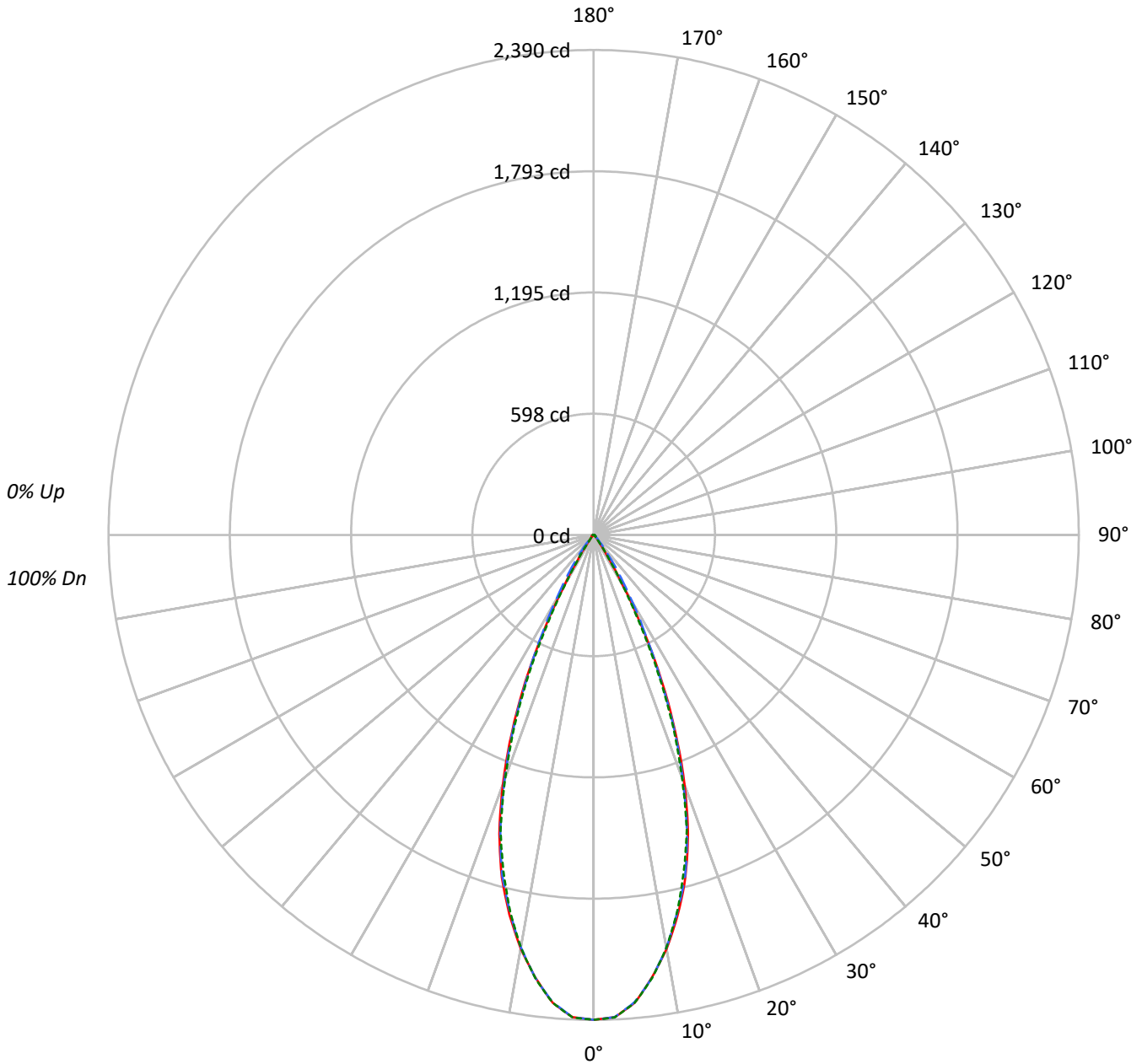
Input Watts (W): 13.6  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20									20									20									20									
RC	80									50									30									10									0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0																
RCR																																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100																			
1	114	112	109	107	112	110	108	106	106	104	102	102	101	99	98	97	97	95																			
2	109	105	102	99	107	103	100	98	100	98	95	97	95	93	95	93	92	90																			
3	105	99	95	92	103	98	94	91	96	92	90	93	90	88	91	89	87	85																			
4	101	94	90	86	99	93	89	85	91	87	85	89	86	84	87	85	83	81																			
5	97	90	85	81	95	89	84	81	87	83	80	86	82	79	84	81	79	77																			
6	93	86	80	77	92	85	80	77	83	79	76	82	78	76	81	78	75	74																			
7	90	82	77	73	88	81	76	73	80	76	73	79	75	72	78	74	72	71																			
8	86	78	73	70	85	78	73	70	77	72	69	76	72	69	75	71	69	68																			
9	83	75	70	67	82	74	70	66	74	69	66	73	69	66	72	68	66	65																			
10	80	72	67	64	79	72	67	64	71	66	64	70	66	63	69	66	63	62																			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	411560	411560	411560
5°	400253	399613	400253
10°	361965	361021	361179
15°	311540	310239	305870
20°	239963	235472	233145
25°	150729	147100	142957
30°	58546	74813	54032
35°	13750	32861	13372
40°	5306	11848	5306
45°	3093	5090	3093
50°	2679	3162	2920
55°	3003	3003	3003
60°	3134	3134	3134
65°	2975	3342	2975
70°	2769	3223	3223
75°	2994	2994	2994
80°	2678	2678	3570
85°	1778	3557	3557

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 5090 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	212.6	18.4
10°-20°	474.2	41.1
20°-30°	351.5	30.5
30°-40°	79.0	6.8
40°-50°	13.7	1.2
50°-60°	8.9	0.8
60°-70°	7.7	0.7
70°-80°	4.9	0.4
80°-90°	1.7	0.1
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1038.3	90.0
0°-40°	1117.3	96.8
0°-60°	1139.9	98.8
0°-90°	1154.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1154.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2390	2390	2390	2390	2390	
5°	2315	2314	2312	2310	2315	213
15°	1747	1736	1740	1716	1716	478
25°	793	782	774	764	752	353
35°	65	93	156	88	64	61
45°	13	14	21	14	13	11
55°	10	10	10	10	10	9
65°	7	8	8	8	7	7
75°	4	4	4	4	4	5
85°	1	2	2	2	2	1
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2389.7	2389.7	2389.7	2389.7	2389.7
2.5°	2378.8	2380.6	2378.8	2378.8	2379.7
5°	2315.2	2314.3	2311.5	2309.7	2315.2
7.5°	2199.8	2202.5	2201.6	2204.3	2202.5
10°	2069.8	2061.7	2064.4	2060.8	2065.3
12.5°	1916.3	1914.5	1904.5	1901.8	1899.9
15°	1747.3	1735.5	1740.0	1716.4	1715.5
17.5°	1545.6	1537.4	1529.2	1525.6	1525.6
20°	1309.3	1305.7	1284.8	1283.0	1272.1
22.5°	1052.2	1036.7	1037.7	1034.9	1018.6
25°	793.2	782.3	774.1	764.2	752.3
27.5°	527.9	548.8	549.7	526.1	484.3
30°	294.4	338.9	376.2	317.1	271.7
32.5°	145.4	189.0	248.1	174.5	138.1
35°	65.4	92.7	156.3	88.1	63.6
37.5°	35.4	47.2	93.6	45.4	34.5
40°	23.6	28.2	52.7	28.2	23.6
42.5°	16.4	19.1	31.8	19.1	17.3
45°	12.7	14.5	20.9	14.5	12.7
47.5°	10.9	11.8	15.4	11.8	11.8
50°	10.0	10.9	11.8	10.9	10.9
52.5°	10.0	10.0	10.9	10.0	10.0
55°	10.0	10.0	10.0	10.0	10.0
57.5°	9.1	9.1	10.0	9.1	9.1
60°	9.1	9.1	9.1	9.1	9.1
62.5°	8.2	8.2	8.2	8.2	8.2
65°	7.3	8.2	8.2	8.2	7.3
67.5°	6.4	7.3	7.3	7.3	7.3
70°	5.5	6.4	6.4	6.4	6.4
72.5°	5.5	5.5	5.5	5.5	5.5
75°	4.5	4.5	4.5	4.5	4.5
77.5°	3.6	3.6	3.6	4.5	3.6
80°	2.7	2.7	2.7	3.6	3.6
82.5°	1.8	1.8	1.8	2.7	2.7
85°	0.9	1.8	1.8	1.8	1.8
87.5°	0.9	0.9	0.9	0.9	0.9
90°	0.0	0.0	0.0	0.0	0.0

Signify Classified - Internal  
Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269

Scaled Data Report



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Scaled Data Report







— 0°-180°    - - 45°-225°    - - - - 90°-270°

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