

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: P886608

Luminaire Tested: ML310LSFL95FS1E-TIR4D40FL-TL3SDSL-850LM-3000K

Issue Date: 7/8/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P886608  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2402-314-17)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 7/8/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO  
Catalog Number: ML310LSFL95FS1E-TIR4D40FL-TL3SDSL-850LM-3000K  
Description: 3IN SQUARE ML FLEX, SELECTABLE CCT, WITH 40D TIR, METALLIC SILVER TRIM  
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 3000K CCT  
Ballast/Driver: -

**Summary**

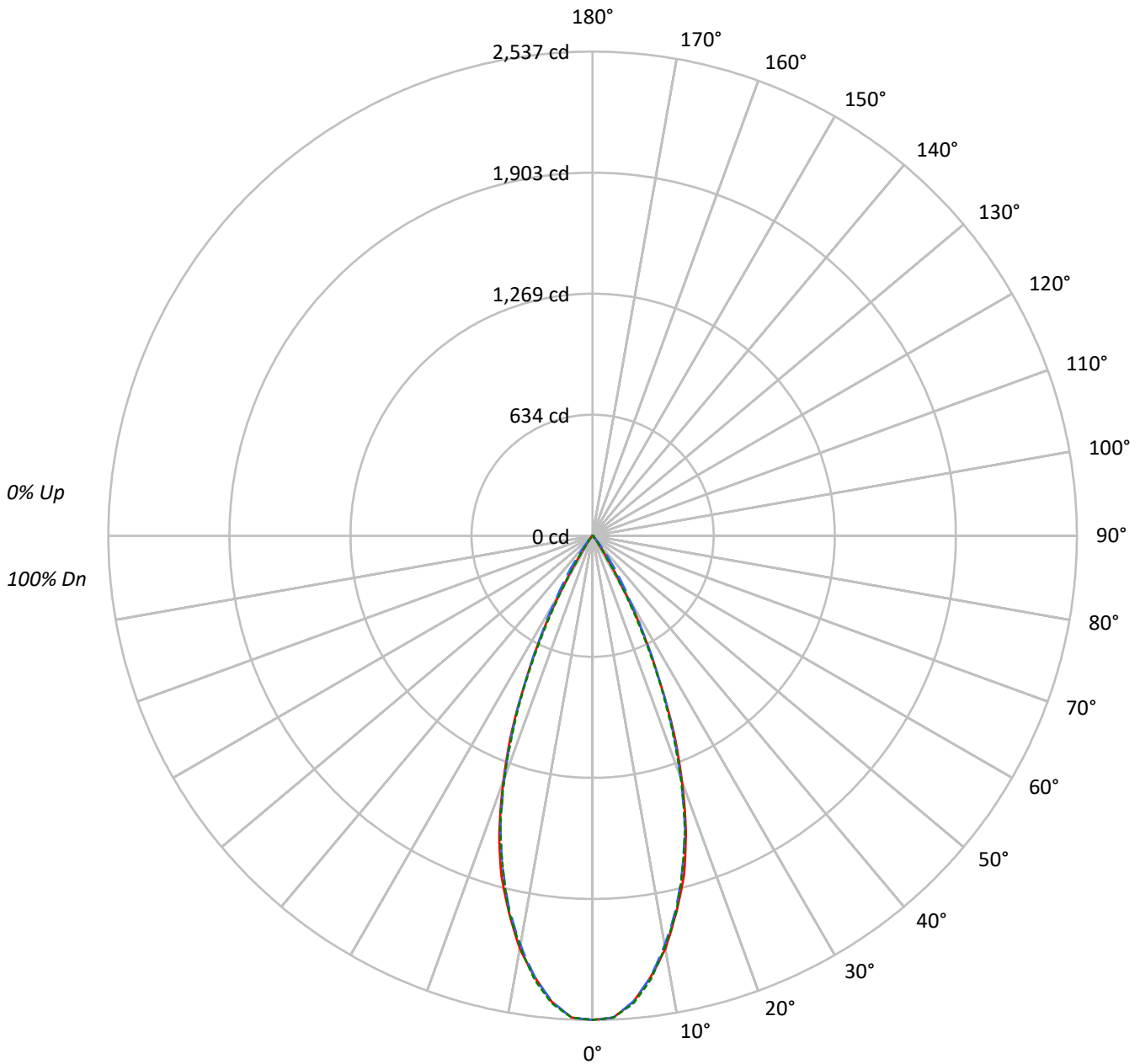
Lumens per Lamp: N/A  
Luminaire Lumens: 1195.2 lumens  
Efficiency: N/A  
Efficacy: 87.9 lumens/watt  
Spacing Criteria (0/90/45): 0.68 / 0.67 / 0.65  
Luminous Opening: Rectangular (W 0.25' x L: 0.25' x H: 0')  
CIE Type: Direct

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					70					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	50	30	10	0		
RCR	0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	100	99	98	97	95	
	1	114	112	110	108	112	110	108	106	106	104	103	102	101	100	99	98	97	95	95	94	92	91	91	91	
	2	110	106	102	99	108	104	101	98	101	98	96	98	96	94	95	94	92	91	91	90	88	86	86	86	
	3	105	100	96	93	104	99	95	92	96	93	90	94	91	89	92	89	88	86	86	84	82	80	78	78	
	4	101	95	90	87	100	94	90	86	92	88	85	90	87	84	88	86	84	82	82	80	78	76	75	75	
	5	97	91	86	82	96	90	85	82	88	84	81	86	83	80	85	82	80	78	78	76	74	72	72	72	
	6	94	86	81	78	92	86	81	78	84	80	77	83	79	77	82	79	76	75	75	73	71	69	69	69	
	7	90	83	78	74	89	82	77	74	81	77	74	80	76	73	79	75	73	72	72	70	68	66	66	66	
	8	87	79	74	71	86	79	74	71	78	73	70	77	73	70	76	72	70	69	69	67	65	63	63	63	
	9	84	76	71	68	83	75	71	68	74	70	67	74	70	67	73	69	67	66	66	64	62	60	59	59	
	10	81	73	68	65	80	72	68	65	72	67	65	71	67	64	70	67	64	63	63	61	59	57	56	56	

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

	0°	45°	90°
0°	436860	436860	436860
5°	423713	423384	425009
10°	383983	380520	382182
15°	329209	323504	323664
20°	250739	247294	247807
25°	154226	154758	151375
30°	62722	76961	57293
35°	13456	34039	12867
40°	4451	11016	4654
45°	2070	3897	2070
50°	1500	2009	1500
55°	1411	1681	1411
60°	1309	1619	1309
65°	1141	1549	1549
70°	1410	1410	1410
75°	1264	1264	1264
80°	893	893	1884
85°	1778	1778	1778

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 3897 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	225.3	18.9
10°-20°	500.1	41.8
20°-30°	369.3	30.9
30°-40°	79.4	6.6
40°-50°	10.2	0.9
50°-60°	4.5	0.4
60°-70°	3.5	0.3
70°-80°	2.2	0.2
80°-90°	0.7	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°	1094.7	91.6
0°-40°	1174.2	98.2
0°-60°	1188.9	99.5
0°-90°	1195.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1195.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2537	2537	2537	2537	2537	
5°	2451	2449	2449	2448	2458	225
15°	1846	1829	1814	1820	1815	504
25°	812	822	814	811	797	370
35°	64	92	162	82	61	62
45°	8	9	16	9	8	7
55°	5	5	6	5	5	4
65°	3	4	4	4	4	3
75°	2	2	2	2	2	2
85°	1	1	1	1	1	1
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2536.6	2536.6	2536.6	2536.6	2536.6
2.5°	2526.2	2525.3	2526.2	2527.1	2526.2
5°	2450.9	2449.0	2449.0	2448.0	2458.4
7.5°	2330.4	2331.3	2329.4	2336.0	2342.6
10°	2195.7	2178.8	2175.9	2188.2	2185.4
12.5°	2022.5	2023.4	2009.3	2013.0	2019.6
15°	1846.4	1829.4	1814.4	1820.0	1815.3
17.5°	1626.1	1617.6	1605.4	1606.3	1609.1
20°	1368.1	1370.0	1349.3	1356.8	1352.1
22.5°	1105.4	1092.2	1087.5	1079.0	1074.3
25°	811.6	822.0	814.4	810.7	796.6
27.5°	564.9	566.8	576.2	556.5	526.3
30°	315.4	351.2	387.0	333.3	288.1
32.5°	151.6	188.3	258.0	174.2	133.7
35°	64.0	92.3	161.9	81.9	61.2
37.5°	33.9	44.3	90.4	41.4	32.0
40°	19.8	24.5	49.0	24.5	20.7
42.5°	11.3	15.1	27.3	15.1	12.2
45°	8.5	9.4	16.0	9.4	8.5
47.5°	6.6	7.5	9.4	7.5	6.6
50°	5.6	5.6	7.5	5.6	5.6
52.5°	4.7	5.6	5.6	5.6	5.6
55°	4.7	4.7	5.6	4.7	4.7
57.5°	4.7	4.7	4.7	4.7	4.7
60°	3.8	3.8	4.7	4.7	3.8
62.5°	3.8	3.8	3.8	3.8	3.8
65°	2.8	3.8	3.8	3.8	3.8
67.5°	2.8	2.8	3.8	2.8	2.8
70°	2.8	2.8	2.8	2.8	2.8
72.5°	1.9	1.9	2.8	2.8	2.8
75°	1.9	1.9	1.9	1.9	1.9
77.5°	0.9	1.9	1.9	1.9	1.9
80°	0.9	0.9	0.9	1.9	1.9
82.5°	0.9	0.9	0.9	0.9	0.9
85°	0.9	0.9	0.9	0.9	0.9
87.5°	0.0	0.0	0.0	0.0	0.0
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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