

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: P886610

Luminaire Tested: ML310LSFL95FS1E-TIR4D40FL-TL3SDSL-850LM-4000K

Issue Date: 7/8/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P886610  
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-4000K  
Description: 3IN SQUARE ML FLEX, SELECTABLE CCT, WITH 40D TIR, METALLIC SILVER TRIM  
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 4000K CCT  
Ballast/Driver: -

**Summary**

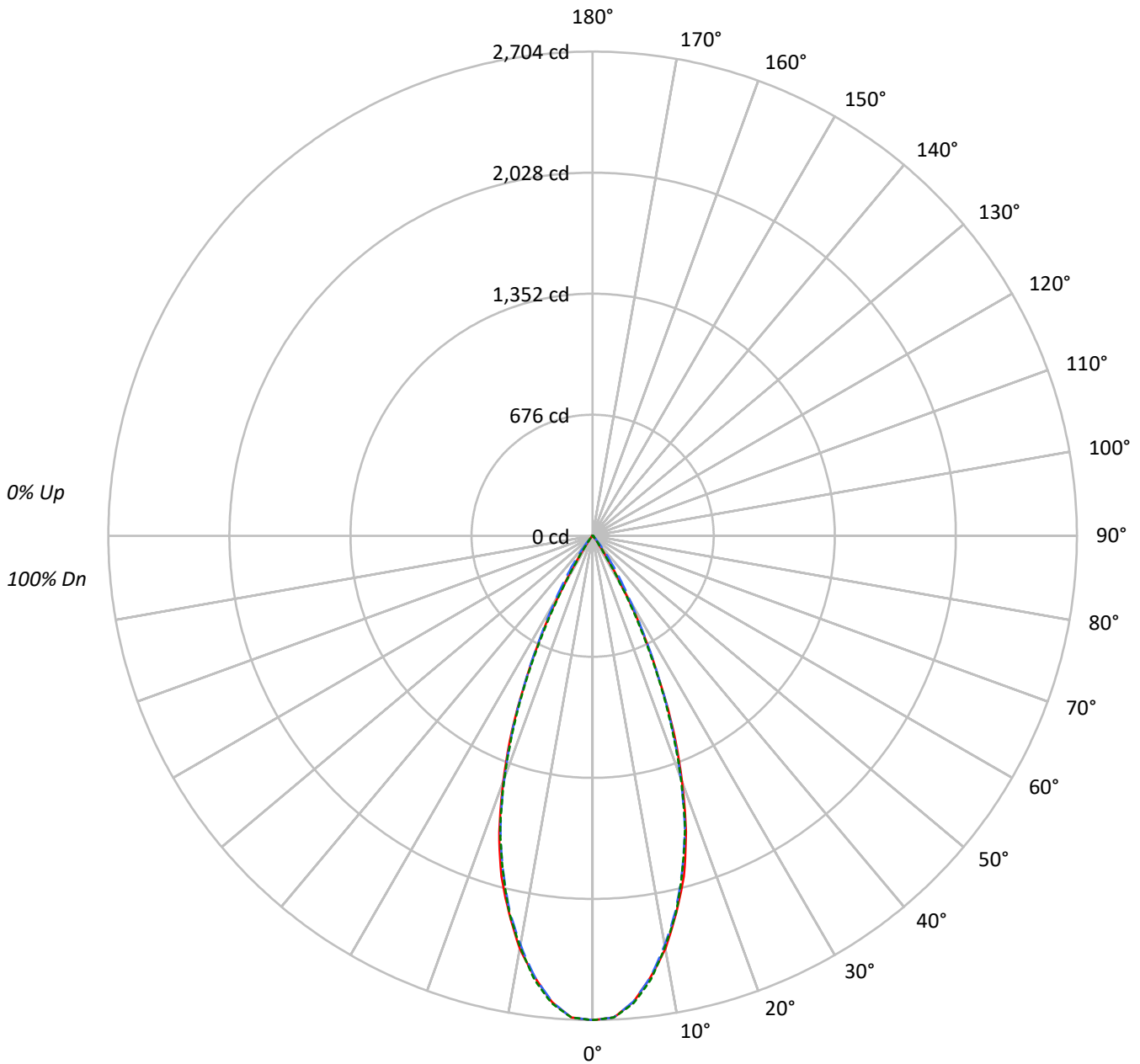
Lumens per Lamp: N/A  
Luminaire Lumens: 1274.1 lumens  
Efficiency: N/A  
Efficacy: 93.7 lumens/watt  
Spacing Criteria (0/90/45): 0.68 / 0.67 / 0.65  
Luminous Opening: Rectangular (W 0.25' x L: 0.25' x H: 0')

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									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	110	108	112	110	108	106	106	104	103	102	101	100	99	98	97	95																			
2	110	106	102	99	108	104	101	98	101	98	96	98	96	94	95	94	92	91																			
3	105	100	96	93	104	99	95	92	96	93	90	94	91	89	92	89	88	86																			
4	101	95	90	87	100	94	90	86	92	88	85	90	87	84	88	86	84	82																			
5	97	91	86	82	96	90	85	82	88	84	81	86	83	80	85	82	80	78																			
6	94	86	81	78	92	86	81	78	84	80	77	83	79	77	82	79	76	75																			
7	90	83	78	74	89	82	77	74	81	77	74	80	76	73	79	75	73	72																			
8	87	79	74	71	86	79	74	71	78	73	70	77	73	70	76	72	70	69																			
9	84	76	71	68	83	75	71	68	74	70	67	74	70	67	73	69	67	66																			
10	81	73	68	65	80	72	68	65	72	67	65	71	67	64	70	67	64	63																			

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

	0°	45°	90°
0°	465724	465724	465724
5°	451719	451374	453103
10°	409358	405685	407434
15°	350962	344882	345060
20°	267307	263623	264173
25°	164430	165000	161371
30°	66878	82052	61092
35°	14360	36309	13708
40°	4744	11736	4969
45°	2192	4165	2192
50°	1608	2143	1608
55°	1501	1802	1501
60°	1378	1722	1378
65°	1223	1630	1630
70°	1511	1511	1511
75°	1331	1331	1331
80°	992	992	1984
85°	1976	1976	1976

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 4165 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	240.2	18.9
10°-20°	533.1	41.8
20°-30°	393.8	30.9
30°-40°	84.7	6.6
40°-50°	10.8	0.9
50°-60°	4.8	0.4
60°-70°	3.7	0.3
70°-80°	2.3	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°	1167.1	91.6
0°-40°	1251.8	98.2
0°-60°	1267.4	99.5
0°-90°	1274.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1274.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2704	2704	2704	2704	2704	
5°	2613	2611	2611	2610	2621	240
15°	1968	1950	1934	1940	1935	537
25°	865	876	868	864	849	395
35°	68	98	173	87	65	66
45°	9	10	17	10	9	8
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°	2704.2	2704.2	2704.2	2704.2	2704.2
2.5°	2693.2	2692.2	2693.2	2694.2	2693.2
5°	2612.9	2610.9	2610.9	2609.9	2620.9
7.5°	2484.4	2485.4	2483.4	2490.4	2497.4
10°	2340.8	2322.8	2319.8	2332.8	2329.8
12.5°	2156.1	2157.1	2142.1	2146.1	2153.1
15°	1968.4	1950.4	1934.3	1940.3	1935.3
17.5°	1733.5	1724.5	1711.5	1712.5	1715.5
20°	1458.5	1460.5	1438.4	1446.5	1441.4
22.5°	1178.5	1164.4	1159.4	1150.3	1145.3
25°	865.3	876.3	868.3	864.3	849.2
27.5°	602.3	604.3	614.3	593.2	561.1
30°	336.3	374.4	412.6	355.3	307.2
32.5°	161.6	200.8	275.0	185.7	142.5
35°	68.3	98.4	172.7	87.3	65.2
37.5°	36.1	47.2	96.4	44.2	34.1
40°	21.1	26.1	52.2	26.1	22.1
42.5°	12.0	16.1	29.1	16.1	13.0
45°	9.0	10.0	17.1	10.0	9.0
47.5°	7.0	8.0	10.0	8.0	7.0
50°	6.0	6.0	8.0	6.0	6.0
52.5°	5.0	6.0	6.0	6.0	6.0
55°	5.0	5.0	6.0	5.0	5.0
57.5°	5.0	5.0	5.0	5.0	5.0
60°	4.0	4.0	5.0	5.0	4.0
62.5°	4.0	4.0	4.0	4.0	4.0
65°	3.0	4.0	4.0	4.0	4.0
67.5°	3.0	3.0	4.0	3.0	3.0
70°	3.0	3.0	3.0	3.0	3.0
72.5°	2.0	2.0	3.0	3.0	3.0
75°	2.0	2.0	2.0	2.0	2.0
77.5°	1.0	2.0	2.0	2.0	2.0
80°	1.0	1.0	1.0	2.0	2.0
82.5°	1.0	1.0	1.0	1.0	1.0
85°	1.0	1.0	1.0	1.0	1.0
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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