

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: P886758

Luminaire Tested: ML310LSFL9FS1E-TIR4D55WFL-TL3SDMB-1000LM-3000K

Issue Date: 7/8/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P886758  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2402-314-21)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 7/8/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO  
Catalog Number: ML310LSFL9FS1E-TIR4D55WFL-TL3SDMB-1000LM-3000K  
Description: 3IN SQUARE ML FLEX, SELECTABLE CCT, WITH 55D TIR, MATTE BLACK TRIM  
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 3000K CCT  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1176.4 lumens  
Efficiency: N/A  
Efficacy: 85.2 lumens/watt  
Spacing Criteria (0/90/45): 0.87 / 0.86 / 0.82  
Luminous Opening: Rectangular (W 0.25' x L: 0.25' x H: 0')  
CIE Type: Direct

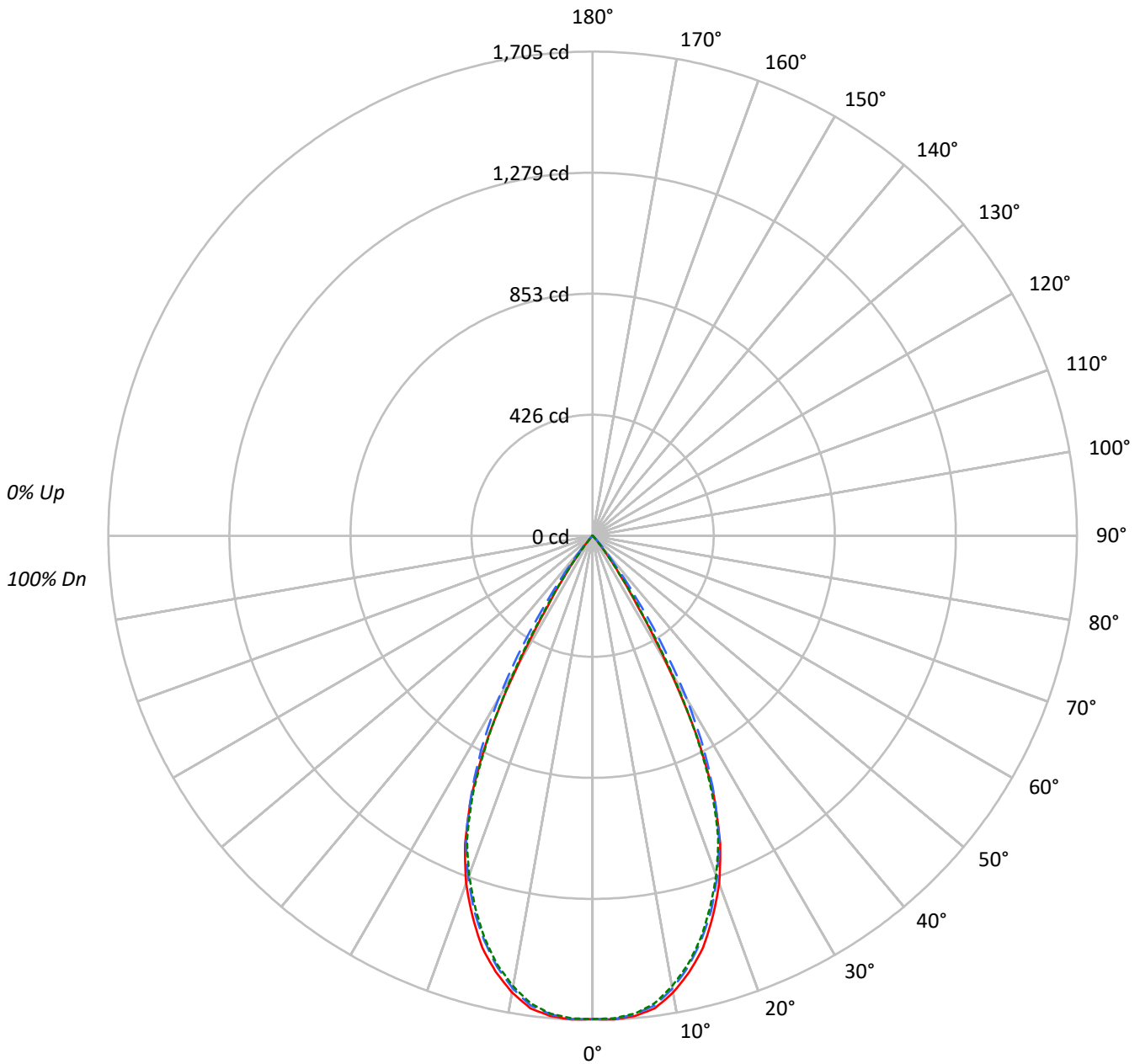
Input Watts (W): 13.8  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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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				
RW	70	50	30	10	70	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	109	107	106	105	104	102	102	100	99	98	97	96	95		
2	109	105	101	98	107	103	100	97	100	97	95	97	95	93	94	93	91	89		
3	104	99	94	91	103	97	93	90	95	91	89	92	90	87	90	88	86	84		
4	100	93	88	85	98	92	88	84	90	86	83	88	85	82	86	84	81	80		
5	96	88	83	79	94	87	82	79	86	81	78	84	80	77	82	79	77	75		
6	92	84	78	74	90	83	78	74	81	77	74	80	76	73	79	75	73	71		
7	88	79	74	70	86	79	74	70	77	73	70	76	72	69	75	72	69	68		
8	84	75	70	66	83	75	70	66	74	69	66	73	69	66	72	68	65	64		
9	80	72	66	63	79	71	66	63	70	66	63	70	65	62	69	65	62	61		
10	77	68	63	60	76	68	63	60	67	63	60	67	62	59	66	62	59	58		

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

	0°	45°	90°
0°	293088	293088	293088
5°	293482	292410	292047
10°	285648	283112	281661
15°	267786	262972	261688
20°	238808	234629	232925
25°	191699	192687	188563
30°	104842	131410	110410
35°	33744	55967	34627
40°	7914	13737	6520
45°	755	4043	755
50°	268	831	268
55°	0	300	0
60°	0	0	0
65°	0	0	0
70°	0	0	0
75°	0	0	0
80°	0	0	0
85°	0	0	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 4043 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	159.4	13.6
10°-20°	411.9	35.0
20°-30°	447.0	38.0
30°-40°	147.9	12.6
40°-50°	9.8	0.8
50°-60°	0.4	0.0
60°-70°	0.0	0.0
70°-80°	0.0	0.0
80°-90°	0.0	0.0
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°	1018.3	86.6
0°-40°	1166.2	99.1
0°-60°	1176.4	100.0
0°-90°	1176.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1176.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1702	1702	1702	1702	1702	
5°	1698	1696	1691	1690	1689	160
15°	1502	1493	1475	1471	1468	417
25°	1009	1018	1014	1007	992	440
35°	160	177	266	179	165	122
45°	3	5	17	5	3	6
55°	0	0	1	0	0	0
65°	0	0	0	0	0	0
75°	0	0	0	0	0	0
85°	0	0	0	0	0	0
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1701.8	1701.8	1701.8	1701.8	1701.8
2.5°	1704.9	1704.9	1703.9	1702.8	1700.7
5°	1697.6	1695.6	1691.4	1690.4	1689.3
7.5°	1678.0	1675.9	1668.6	1661.4	1661.4
10°	1633.4	1632.4	1618.9	1614.8	1610.6
12.5°	1573.3	1569.2	1554.7	1549.5	1547.4
15°	1501.9	1492.6	1474.9	1470.8	1467.7
17.5°	1405.5	1401.4	1385.9	1378.6	1373.4
20°	1303.0	1293.7	1280.2	1275.0	1270.9
22.5°	1173.5	1168.4	1164.2	1161.1	1154.9
25°	1008.8	1018.2	1014.0	1006.8	992.3
27.5°	794.4	833.8	848.3	826.5	785.1
30°	527.2	610.1	660.8	597.6	555.2
32.5°	294.2	344.9	456.8	365.6	323.2
35°	160.5	177.1	266.2	179.2	164.7
37.5°	77.7	90.1	132.6	86.0	78.7
40°	35.2	42.5	61.1	40.4	29.0
42.5°	10.4	18.6	32.1	14.5	9.3
45°	3.1	5.2	16.6	5.2	3.1
47.5°	2.1	2.1	7.3	2.1	2.1
50°	1.0	1.0	3.1	1.0	1.0
52.5°	0.0	1.0	1.0	1.0	1.0
55°	0.0	0.0	1.0	0.0	0.0
57.5°	0.0	0.0	0.0	0.0	0.0
60°	0.0	0.0	0.0	0.0	0.0
62.5°	0.0	0.0	0.0	0.0	0.0
65°	0.0	0.0	0.0	0.0	0.0
67.5°	0.0	0.0	0.0	0.0	0.0
70°	0.0	0.0	0.0	0.0	0.0
72.5°	0.0	0.0	0.0	0.0	0.0
75°	0.0	0.0	0.0	0.0	0.0
77.5°	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0
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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