

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: P886761

Luminaire Tested: ML310LSFL9FS1E-TIR4D55WFL-TL3SDMB-1000LM-5000K

Issue Date: 7/8/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P886761  
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-5000K  
Description: 3IN SQUARE ML FLEX, SELECTABLE CCT, WITH 55D TIR, MATTE BLACK TRIM  
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 5000K CCT  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1316.2 lumens  
Efficiency: N/A  
Efficacy: 95.4 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')

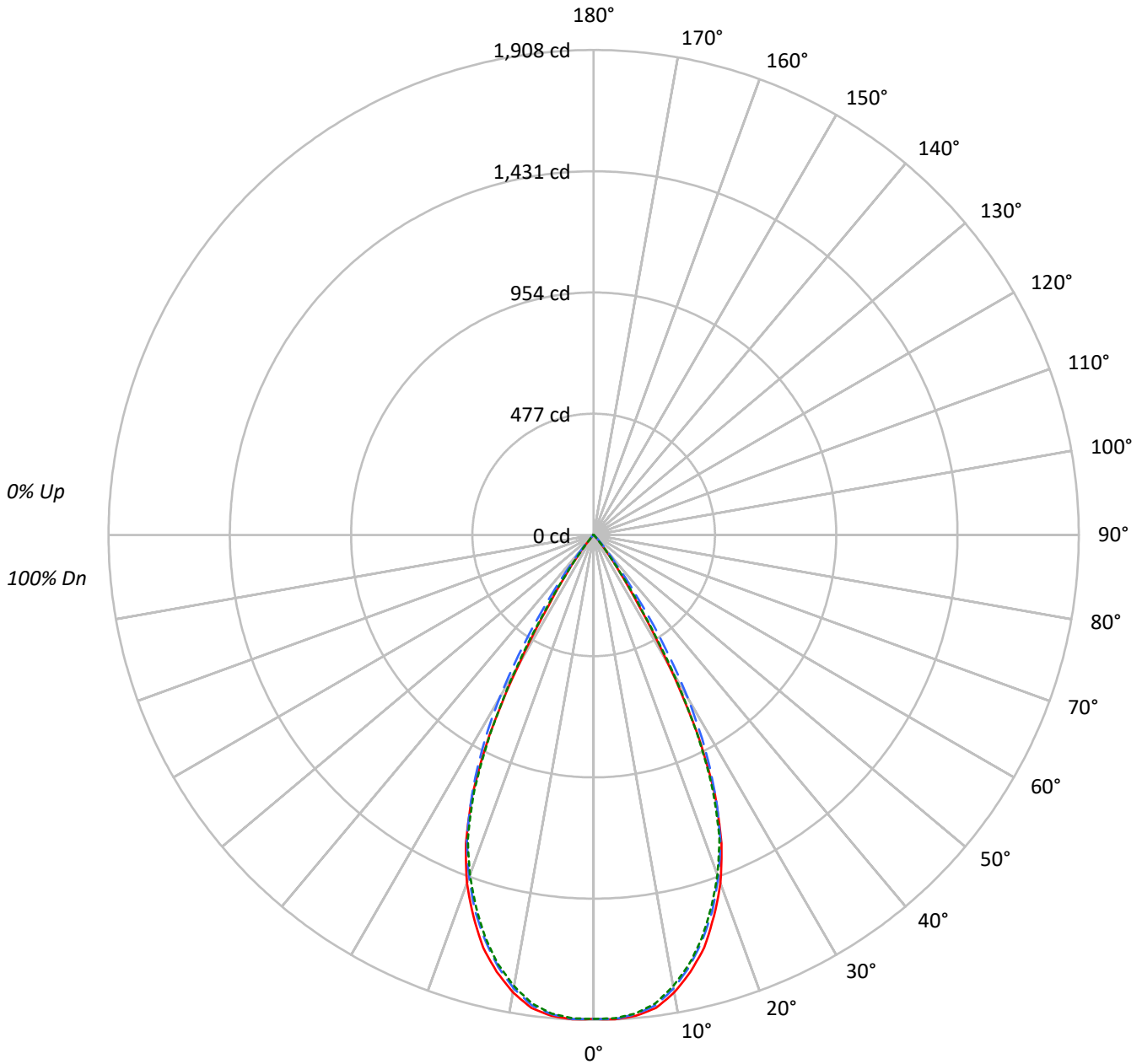
CIE Type: Direct

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					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	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°	327929	327929	327929
5°	328387	327176	326779
10°	319610	316777	315150
15°	299612	294245	292801
20°	267197	262524	260618
25°	214502	215604	210968
30°	117311	147041	123535
35°	37760	62611	38748
40°	8858	15378	7284
45°	852	4506	852
50°	322	938	322
55°	0	360	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: 4506 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	178.4	13.6
10°-20°	460.9	35.0
20°-30°	500.1	38.0
30°-40°	165.5	12.6
40°-50°	10.9	0.8
50°-60°	0.5	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°	1139.3	86.6
0°-40°	1304.9	99.1
0°-60°	1316.2	100.0
0°-90°	1316.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1316.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1904	1904	1904	1904	1904	
5°	1900	1897	1892	1891	1890	179
15°	1680	1670	1650	1646	1642	466
25°	1129	1139	1135	1126	1110	492
35°	180	198	298	200	184	137
45°	4	6	18	6	4	7
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°	1904.1	1904.1	1904.1	1904.1	1904.1
2.5°	1907.6	1907.6	1906.4	1905.3	1903.0
5°	1899.5	1897.2	1892.5	1891.4	1890.2
7.5°	1877.5	1875.1	1867.0	1858.9	1858.9
10°	1827.6	1826.5	1811.4	1806.8	1802.1
12.5°	1760.4	1755.8	1739.5	1733.8	1731.4
15°	1680.4	1670.0	1650.3	1645.7	1642.2
17.5°	1572.7	1568.0	1550.6	1542.5	1536.7
20°	1457.9	1447.5	1432.4	1426.6	1422.0
22.5°	1313.1	1307.3	1302.6	1299.2	1292.2
25°	1128.8	1139.2	1134.6	1126.5	1110.2
27.5°	888.9	932.9	949.2	924.8	878.5
30°	589.9	682.6	739.4	668.7	621.2
32.5°	329.1	385.9	511.1	409.1	361.6
35°	179.6	198.2	297.8	200.5	184.3
37.5°	86.9	100.8	148.3	96.2	88.1
40°	39.4	47.5	68.4	45.2	32.4
42.5°	11.6	20.9	35.9	16.2	10.4
45°	3.5	5.8	18.5	5.8	3.5
47.5°	2.3	2.3	8.1	2.3	2.3
50°	1.2	1.2	3.5	1.2	1.2
52.5°	0.0	1.2	1.2	1.2	1.2
55°	0.0	0.0	1.2	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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