

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: P886766

Luminaire Tested: ML310LSFL9FS1E-TIR4D55WFL-TL3SDMW-1000LM-5000K

Issue Date: 7/8/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P886766  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2402-314-19)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 7/8/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO  
Catalog Number: ML310LSFL9FS1E-TIR4D55WFL-TL3SDMW-1000LM-5000K  
Description: 3IN SQUARE ML FLEX, SELECTABLE CCT, WITH 55D TIR, MATTE WHITE TRIM  
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 5000K CCT  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1383.4 lumens  
Efficiency: N/A  
Efficacy: 100.2 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')

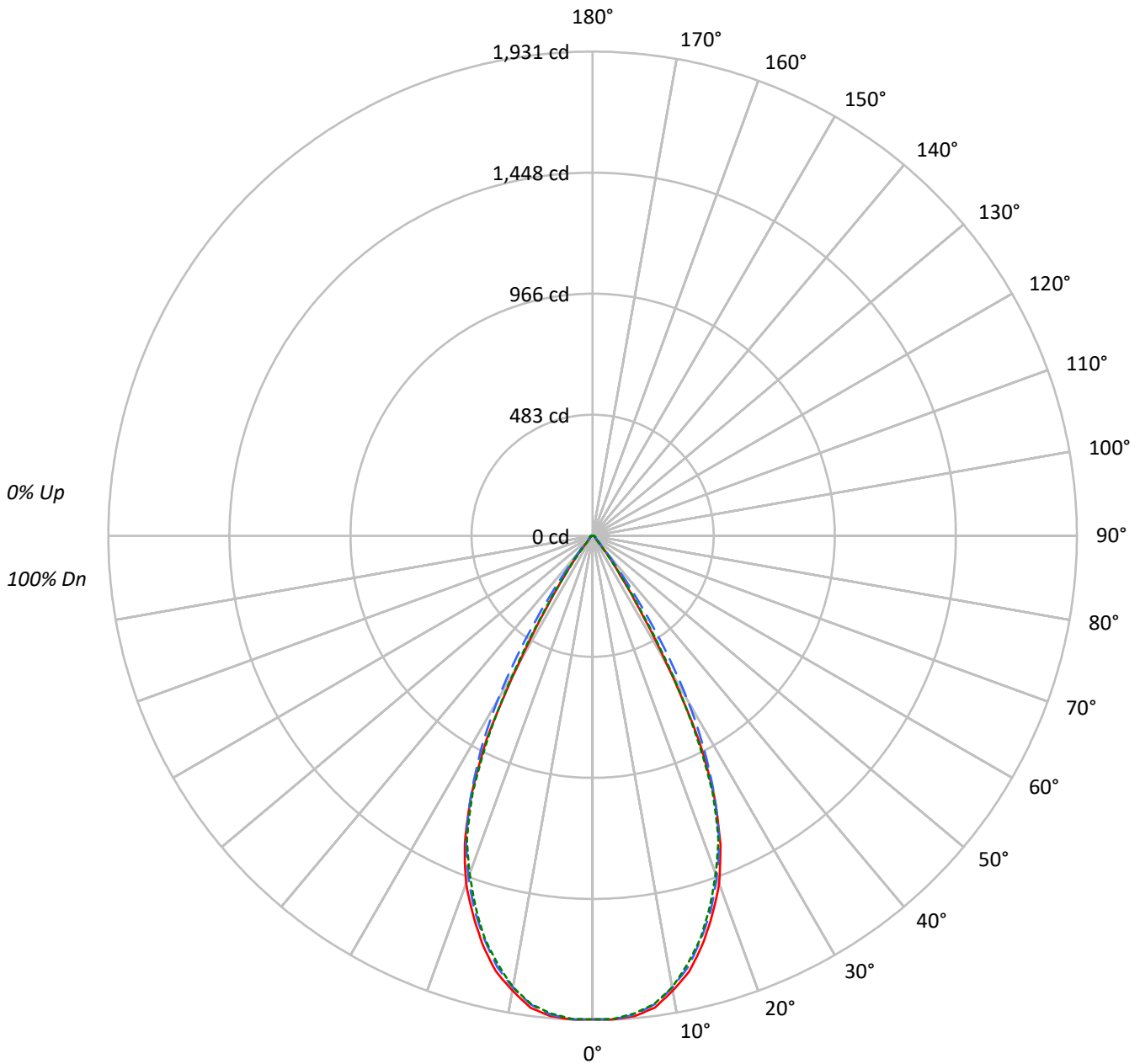
CIE Type: Direct

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									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	111	109	107	111	109	107	105	105	103	102	101	100	99	98	97	96	94																			
2	109	104	100	97	106	102	99	96	99	96	94	96	94	92	93	92	90	88																			
3	104	98	93	89	102	96	92	89	94	90	87	91	88	86	89	87	84	83																			
4	99	92	87	83	97	91	86	82	89	85	81	87	83	80	85	82	80	78																			
5	94	87	81	77	93	86	81	77	84	80	76	82	79	76	81	78	75	74																			
6	90	82	77	73	89	81	76	72	80	75	72	78	74	71	77	74	71	70																			
7	86	78	72	68	85	77	72	68	76	71	68	75	71	67	74	70	67	66																			
8	83	74	68	64	81	73	68	64	72	67	64	71	67	64	70	66	64	62																			
9	79	70	65	61	78	70	65	61	69	64	61	68	64	61	67	63	60	59																			
10	76	67	61	58	75	66	61	58	66	61	58	65	61	58	64	60	57	56																			

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

	0°	45°	90°
0°	332131	332131	332131
5°	332415	331412	330599
10°	322058	320029	319627
15°	301288	297151	296331
20°	270405	265310	262762
25°	218265	218702	215167
30°	117311	151197	123774
35°	40199	66774	41902
40°	12253	18750	10162
45°	4238	8184	4506
50°	4046	4662	4046
55°	4174	4534	4174
60°	4374	4374	4374
65°	4238	4238	4238
70°	4079	4079	4683
75°	3859	4658	4658
80°	3471	4562	4562
85°	4545	4545	4545

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 8184 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	180.4	13.0
10°-20°	465.6	33.7
20°-30°	507.8	36.7
30°-40°	174.8	12.6
40°-50°	22.2	1.6
50°-60°	12.7	0.9
60°-70°	10.5	0.8
70°-80°	6.9	0.5
80°-90°	2.5	0.2
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°	1153.9	83.4
0°-40°	1328.7	96.0
0°-60°	1363.6	98.6
0°-90°	1383.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1383.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1928	1928	1928	1928	1928	
5°	1923	1920	1917	1912	1912	181
15°	1690	1686	1667	1667	1662	470
25°	1149	1158	1151	1144	1132	501
35°	191	209	318	214	199	145
45°	17	21	34	20	18	18
55°	14	14	15	14	14	12
65°	10	10	10	12	10	10
75°	6	6	7	7	7	6
85°	2	2	2	2	2	2
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1928.5	1928.5	1928.5	1928.5	1928.5
2.5°	1930.9	1930.9	1929.7	1929.7	1928.5
5°	1922.8	1920.4	1917.0	1912.3	1912.3
7.5°	1898.4	1891.5	1885.7	1883.3	1883.3
10°	1841.6	1842.8	1830.0	1824.2	1827.7
12.5°	1780.2	1770.9	1760.5	1754.7	1748.9
15°	1689.8	1686.3	1666.6	1666.6	1662.0
17.5°	1585.5	1584.3	1565.8	1560.0	1551.9
20°	1475.4	1460.3	1447.6	1444.1	1433.7
22.5°	1331.7	1322.4	1318.9	1314.3	1309.7
25°	1148.6	1157.8	1150.9	1143.9	1132.3
27.5°	914.4	950.4	965.4	946.9	891.3
30°	589.9	691.9	760.3	687.3	622.4
32.5°	344.2	409.1	530.8	420.7	375.5
35°	191.2	208.6	317.6	214.4	199.3
37.5°	106.6	114.7	162.3	108.9	102.0
40°	54.5	62.6	83.4	59.1	45.2
42.5°	25.5	35.9	51.0	30.1	24.3
45°	17.4	20.9	33.6	19.7	18.5
47.5°	16.2	17.4	23.2	17.4	16.2
50°	15.1	15.1	17.4	15.1	15.1
52.5°	13.9	15.1	15.1	15.1	13.9
55°	13.9	13.9	15.1	13.9	13.9
57.5°	12.7	13.9	13.9	13.9	12.7
60°	12.7	12.7	12.7	12.7	12.7
62.5°	11.6	11.6	11.6	11.6	11.6
65°	10.4	10.4	10.4	11.6	10.4
67.5°	9.3	9.3	9.3	10.4	9.3
70°	8.1	8.1	8.1	9.3	9.3
72.5°	7.0	7.0	8.1	8.1	8.1
75°	5.8	5.8	7.0	7.0	7.0
77.5°	4.6	4.6	5.8	5.8	5.8
80°	3.5	4.6	4.6	4.6	4.6
82.5°	2.3	3.5	3.5	3.5	3.5
85°	2.3	2.3	2.3	2.3	2.3
87.5°	1.2	1.2	1.2	1.2	1.2
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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