

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: P886760

Luminaire Tested: ML310LSFL9FS1E-TIR4D55WFL-TL3SDMB-1000LM-4000K

Issue Date: 7/8/2024

Test Information

Test Method: LM-79-2019
Report Number: P886760
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-4000K
Description: 3IN SQUARE ML FLEX, SELECTABLE CCT, WITH 55D TIR, MATTE BLACK TRIM
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 4000K CCT
Ballast/Driver: -

Summary

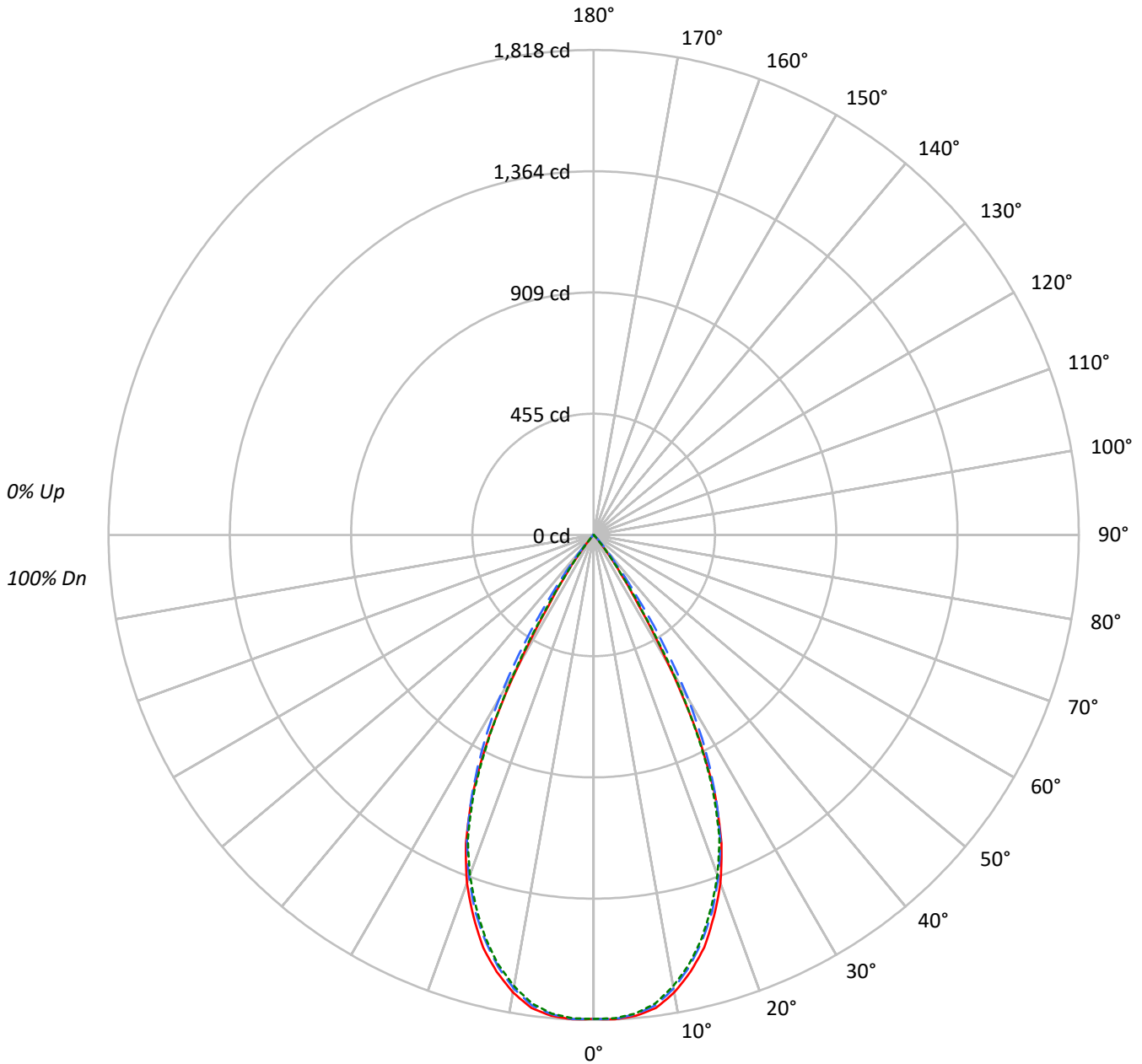
Lumens per Lamp: N/A
Luminaire Lumens: 1254.1 lumens
Efficiency: N/A
Efficacy: 90.9 lumens/watt
Spacing Criteria (0/90/45): 0.87 / 0.86 / 0.82
Luminous Opening: Rectangular (W 0.25' x L: 0.25' x H: 0')
CIE Type: Direct

Input Watts (W): 13.8
Input Voltage (V): NR
Input Current (A_{in}): 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								
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°	312464	312464	312464
5°	312879	311738	311358
10°	304535	301824	300286
15°	285473	280356	278983
20°	254588	250134	248320
25°	204374	205419	201029
30°	111782	140101	117709
35°	35994	59668	36919
40°	8431	14658	6947
45°	804	4311	804
50°	295	884	295
55°	0	330	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: 4311 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	169.9	13.6
10°-20°	439.1	35.0
20°-30°	476.5	38.0
30°-40°	157.7	12.6
40°-50°	10.4	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°	1085.6	86.6
0°-40°	1243.3	99.1
0°-60°	1254.1	100.0
0°-90°	1254.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1254.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1814	1814	1814	1814	1814	
5°	1810	1808	1803	1802	1801	171
15°	1601	1591	1572	1568	1565	444
25°	1076	1086	1081	1073	1058	469
35°	171	189	284	191	176	130
45°	3	6	18	6	3	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°	1814.3	1814.3	1814.3	1814.3	1814.3
2.5°	1817.6	1817.6	1816.5	1815.4	1813.2
5°	1809.8	1807.6	1803.2	1802.1	1801.0
7.5°	1788.9	1786.7	1778.9	1771.2	1771.2
10°	1741.4	1740.3	1725.9	1721.5	1717.1
12.5°	1677.3	1672.9	1657.5	1651.9	1649.7
15°	1601.1	1591.2	1572.4	1568.0	1564.7
17.5°	1498.5	1494.0	1477.5	1469.7	1464.2
20°	1389.1	1379.2	1364.8	1359.3	1354.9
22.5°	1251.1	1245.6	1241.2	1237.9	1231.2
25°	1075.5	1085.5	1081.0	1073.3	1057.9
27.5°	847.0	888.9	904.4	881.2	837.0
30°	562.1	650.4	704.5	637.1	591.9
32.5°	313.6	367.7	487.0	389.8	344.5
35°	171.2	188.8	283.8	191.0	175.6
37.5°	82.8	96.1	141.3	91.7	83.9
40°	37.5	45.3	65.2	43.1	30.9
42.5°	11.0	19.9	34.2	15.5	9.9
45°	3.3	5.5	17.7	5.5	3.3
47.5°	2.2	2.2	7.7	2.2	2.2
50°	1.1	1.1	3.3	1.1	1.1
52.5°	0.0	1.1	1.1	1.1	1.1
55°	0.0	0.0	1.1	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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