

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: P886770

Luminaire Tested: ML310LSFL9FS1E-TIR4D55WFL-TL3SDSL-1000LM-4000K

Issue Date: 7/8/2024

Test Information

Test Method: LM-79-2019
Report Number: P886770
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2402-314-20)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 7/8/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: ML310LSFL9FS1E-TIR4D55WFL-TL3SDSL-1000LM-4000K
Description: 3IN SQUARE ML FLEX, SELECTABLE CCT, WITH 55D TIR, METALLIC SILVER TRIM
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 4000K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1311.5 lumens
Efficiency: N/A
Efficacy: 95.0 lumens/watt
Spacing Criteria (0/90/45): 0.85 / 0.84 / 0.81
Luminous Opening: Rectangular (W 0.25' x L: 0.25' x H: 0')
CIE Type: Direct

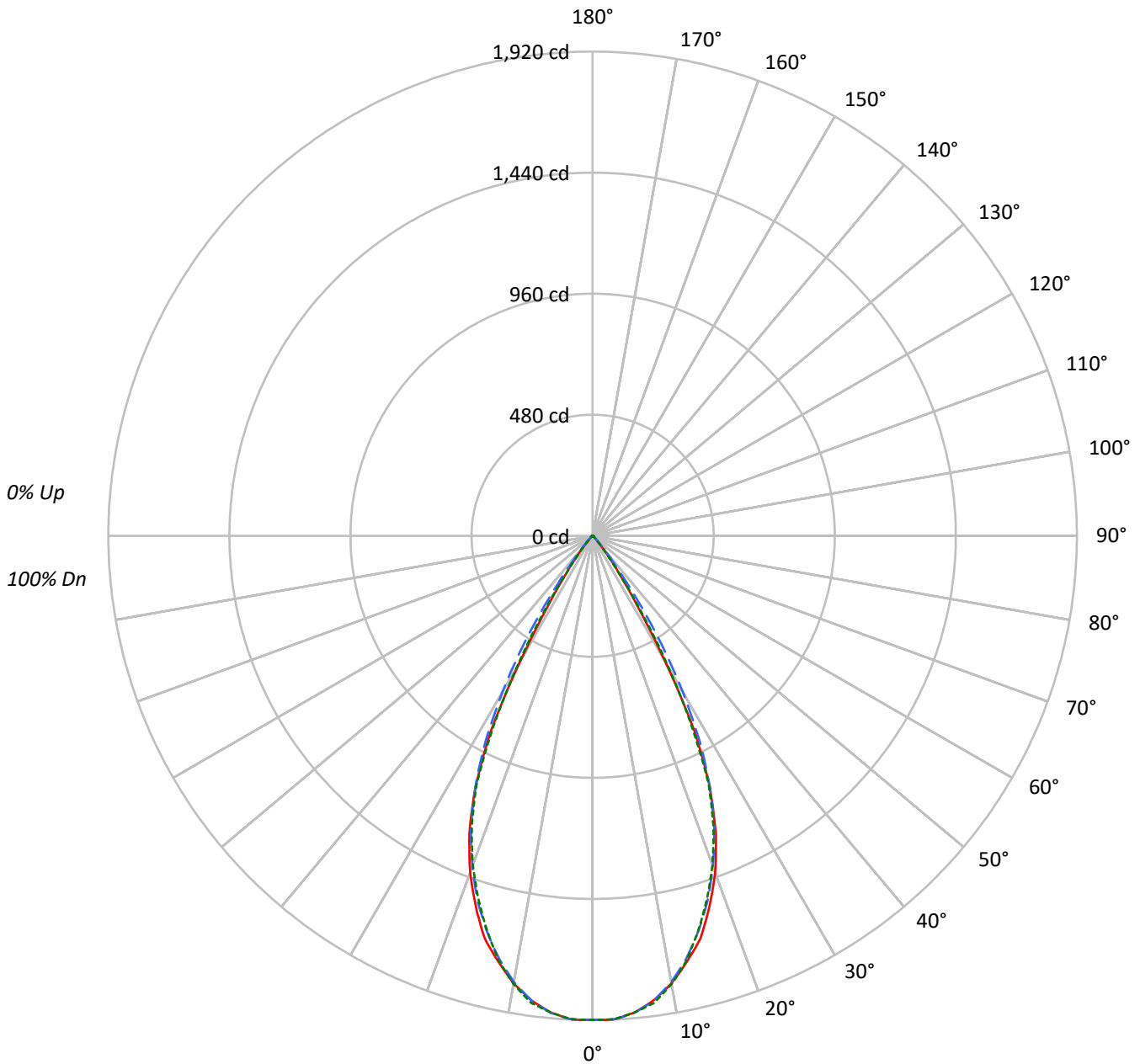
Input Watts (W): 13.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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									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	112	109	107	105	105	104	102	102	100	99	98	97	96	94																			
2	109	104	101	98	107	103	99	97	100	97	94	97	94	92	94	92	91	89																			
3	104	98	94	90	102	97	93	89	94	91	88	92	89	87	90	87	85	84																			
4	100	93	88	84	98	92	87	83	90	86	82	88	84	81	86	83	81	79																			
5	95	88	82	78	94	87	82	78	85	81	77	83	80	77	82	79	76	75																			
6	91	83	78	74	90	82	77	73	81	76	73	79	76	73	78	75	72	71																			
7	87	79	73	70	86	78	73	69	77	72	69	76	72	69	75	71	68	67																			
8	83	75	69	66	82	74	69	66	73	69	65	72	68	65	71	68	65	64																			
9	80	71	66	62	79	71	66	62	70	65	62	69	65	62	68	64	62	60																			
10	77	68	63	59	76	67	62	59	67	62	59	66	62	59	65	61	59	57																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	330667	330667	330667
5°	328110	328300	328110
10°	315115	314153	315692
15°	294691	289182	288593
20°	260233	255376	254350
25°	208554	209181	206654
30°	113075	141612	118345
35°	39000	61980	38075
40°	9937	16142	8678
45°	2411	5918	2679
50°	1768	2358	2063
55°	1982	1982	1982
60°	1894	1894	1894
65°	1345	1793	1793
70°	1662	1662	1662
75°	1464	2196	2196
80°	1091	2182	2182
85°	2174	2174	2174

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 5918 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	178.2	13.6
10°-20°	453.0	34.5
20°-30°	487.1	37.1
30°-40°	163.5	12.5
40°-50°	15.7	1.2
50°-60°	5.9	0.4
60°-70°	4.4	0.3
70°-80°	2.8	0.2
80°-90°	1.0	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°	1118.3	85.3
0°-40°	1281.8	97.7
0°-60°	1303.3	99.4
0°-90°	1311.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1311.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1920	1920	1920	1920	1920	
5°	1898	1898	1899	1899	1898	178
15°	1653	1636	1622	1623	1619	458
25°	1098	1113	1101	1106	1088	480
35°	186	191	295	196	181	137
45°	10	12	24	13	11	12
55°	7	7	7	7	7	6
65°	3	4	4	4	4	4
75°	2	2	3	3	3	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°	1920.0	1920.0	1920.0	1920.0	1920.0
2.5°	1920.0	1918.9	1920.0	1920.0	1918.9
5°	1897.9	1897.9	1899.0	1899.0	1897.9
7.5°	1858.2	1858.2	1859.3	1865.9	1868.1
10°	1801.9	1798.6	1796.4	1800.8	1805.2
12.5°	1729.0	1726.8	1716.9	1715.8	1723.5
15°	1652.8	1636.3	1621.9	1623.0	1618.6
17.5°	1541.3	1534.7	1517.0	1517.0	1508.2
20°	1419.9	1405.5	1393.4	1394.5	1387.8
22.5°	1277.4	1277.4	1262.0	1270.8	1252.0
25°	1097.5	1112.9	1100.8	1106.3	1087.5
27.5°	877.7	904.2	919.7	907.6	851.3
30°	568.6	663.6	712.1	652.5	595.1
32.5°	322.4	383.1	502.4	398.6	369.9
35°	185.5	191.0	294.8	196.5	181.1
37.5°	96.1	101.6	147.9	98.3	91.6
40°	44.2	50.8	71.8	50.8	38.6
42.5°	17.7	27.6	40.9	22.1	17.7
45°	9.9	12.1	24.3	13.2	11.0
47.5°	8.8	8.8	14.4	9.9	8.8
50°	6.6	7.7	8.8	7.7	7.7
52.5°	6.6	6.6	7.7	6.6	6.6
55°	6.6	6.6	6.6	6.6	6.6
57.5°	5.5	5.5	6.6	6.6	5.5
60°	5.5	5.5	5.5	5.5	5.5
62.5°	4.4	4.4	5.5	5.5	5.5
65°	3.3	4.4	4.4	4.4	4.4
67.5°	3.3	3.3	4.4	4.4	4.4
70°	3.3	3.3	3.3	3.3	3.3
72.5°	2.2	3.3	3.3	3.3	3.3
75°	2.2	2.2	3.3	3.3	3.3
77.5°	1.1	2.2	2.2	2.2	2.2
80°	1.1	1.1	2.2	2.2	2.2
82.5°	1.1	1.1	1.1	1.1	1.1
85°	1.1	1.1	1.1	1.1	1.1
87.5°	0.0	0.0	0.0	1.1	1.1
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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