

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: P886701

Luminaire Tested: ML310LSFL9FS1E-TIR4D25NFL-TL3SDMB-1000LM-5000K

Issue Date: 7/5/2024

Test Information

Test Method: LM-79-2019
Report Number: P886701
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2402-314-15)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 7/5/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: ML310LSFL9FS1E-TIR4D25NFL-TL3SDMB-1000LM-5000K
Description: 3IN SQUARE ML FLEX, SELECTABLE CCT, WITH 25D TIR, MATTE BLACK TRIM
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 5000K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1194.6 lumens
Efficiency: N/A
Efficacy: 86.6 lumens/watt
Spacing Criteria (0/90/45): 0.5 / 0.49 / 0.52
Luminous Opening: Rectangular (W 0.25' x L: 0.25' x H: 0')

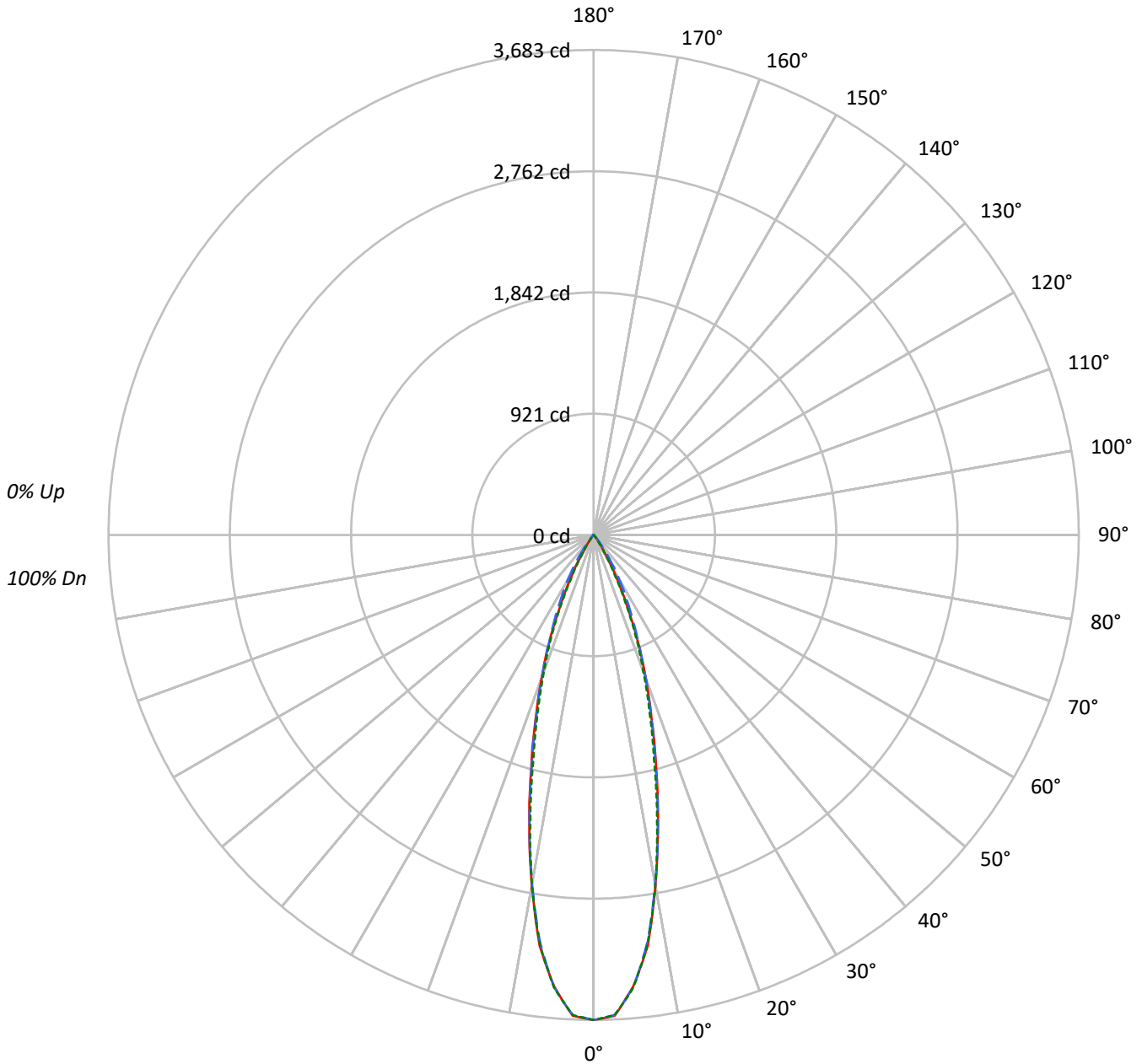
CIE Type: Direct

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	0					
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100								
1	115	112	110	109	112	110	108	107	106	105	104	103	102	100	99	98	98	96								
2	110	107	103	101	108	105	102	100	102	99	97	99	97	95	96	95	93	92								
3	106	101	98	94	105	100	97	94	98	95	92	95	93	91	93	91	89	88								
4	103	97	93	89	101	96	92	89	94	90	88	92	89	87	90	88	86	84								
5	99	93	88	85	98	92	88	84	90	86	84	89	85	83	87	84	82	81								
6	96	89	84	81	94	88	84	81	87	83	80	85	82	80	84	81	79	78								
7	92	85	81	77	91	85	80	77	84	80	77	83	79	77	82	78	76	75								
8	89	82	78	74	88	82	77	74	81	77	74	80	76	74	79	76	73	72								
9	87	79	75	72	86	79	74	71	78	74	71	77	74	71	76	73	71	70								
10	84	76	72	69	83	76	72	69	75	71	69	75	71	69	74	71	68	67								

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	634365	634365	634365
5°	595107	596299	596905
10°	472629	470391	472419
15°	327230	324128	315249
20°	211005	211005	202080
25°	116334	131080	110596
30°	49120	76543	42657
35°	15348	32903	12678
40°	3125	11736	3125
45°	1120	2825	1120
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: 2825 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	305.2	25.6
10°-20°	503.3	42.1
20°-30°	301.6	25.2
30°-40°	76.2	6.4
40°-50°	7.6	0.6
50°-60°	0.6	0.1
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°	1110.1	92.9
0°-40°	1186.4	99.3
0°-60°	1194.6	100.0
0°-90°	1194.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1194.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3683	3683	3683	3683	3683	
5°	3442	3455	3449	3449	3453	306
15°	1835	1825	1818	1805	1768	508
25°	612	664	690	646	582	288
35°	73	104	156	92	60	56
45°	5	7	12	7	5	4
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°	3683.4	3683.4	3683.4	3683.4	3683.4
2.5°	3655.6	3647.5	3649.8	3647.5	3648.6
5°	3442.3	3455.0	3449.2	3449.2	3452.7
7.5°	3145.5	3125.8	3122.3	3121.1	3132.7
10°	2702.6	2715.3	2689.8	2696.8	2701.4
12.5°	2257.4	2253.9	2251.6	2240.0	2223.7
15°	1835.3	1824.9	1817.9	1805.2	1768.1
17.5°	1465.5	1464.3	1449.3	1424.9	1411.0
20°	1151.3	1157.1	1151.3	1126.9	1102.6
22.5°	882.3	910.1	888.1	878.8	840.6
25°	612.2	664.3	689.8	645.8	582.0
27.5°	405.8	461.4	526.4	435.9	372.2
30°	247.0	295.6	384.9	277.1	214.5
32.5°	140.3	183.2	262.0	167.0	118.3
35°	73.0	104.3	156.5	91.6	60.3
37.5°	30.1	52.2	90.4	45.2	26.7
40°	13.9	22.0	52.2	20.9	13.9
42.5°	8.1	10.4	26.7	10.4	8.1
45°	4.6	7.0	11.6	7.0	4.6
47.5°	3.5	3.5	5.8	3.5	3.5
50°	1.2	2.3	3.5	2.3	1.2
52.5°	1.2	1.2	2.3	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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