

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: P886731

Luminaire Tested: ML310LSFL9FS1E-TIR4D40FL-TL3SDMB-1000LM-5000K

Issue Date: 7/8/2024

Test Information

Test Method: LM-79-2019
Report Number: P886731
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2402-314-18)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 7/8/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: ML310LSFL9FS1E-TIR4D40FL-TL3SDMB-1000LM-5000K
Description: 3IN SQUARE ML FLEX, SELECTABLE CCT, WITH 40D TIR, MATTE BLACK TRIM
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 5000K CCT
Ballast/Driver: -

Summary

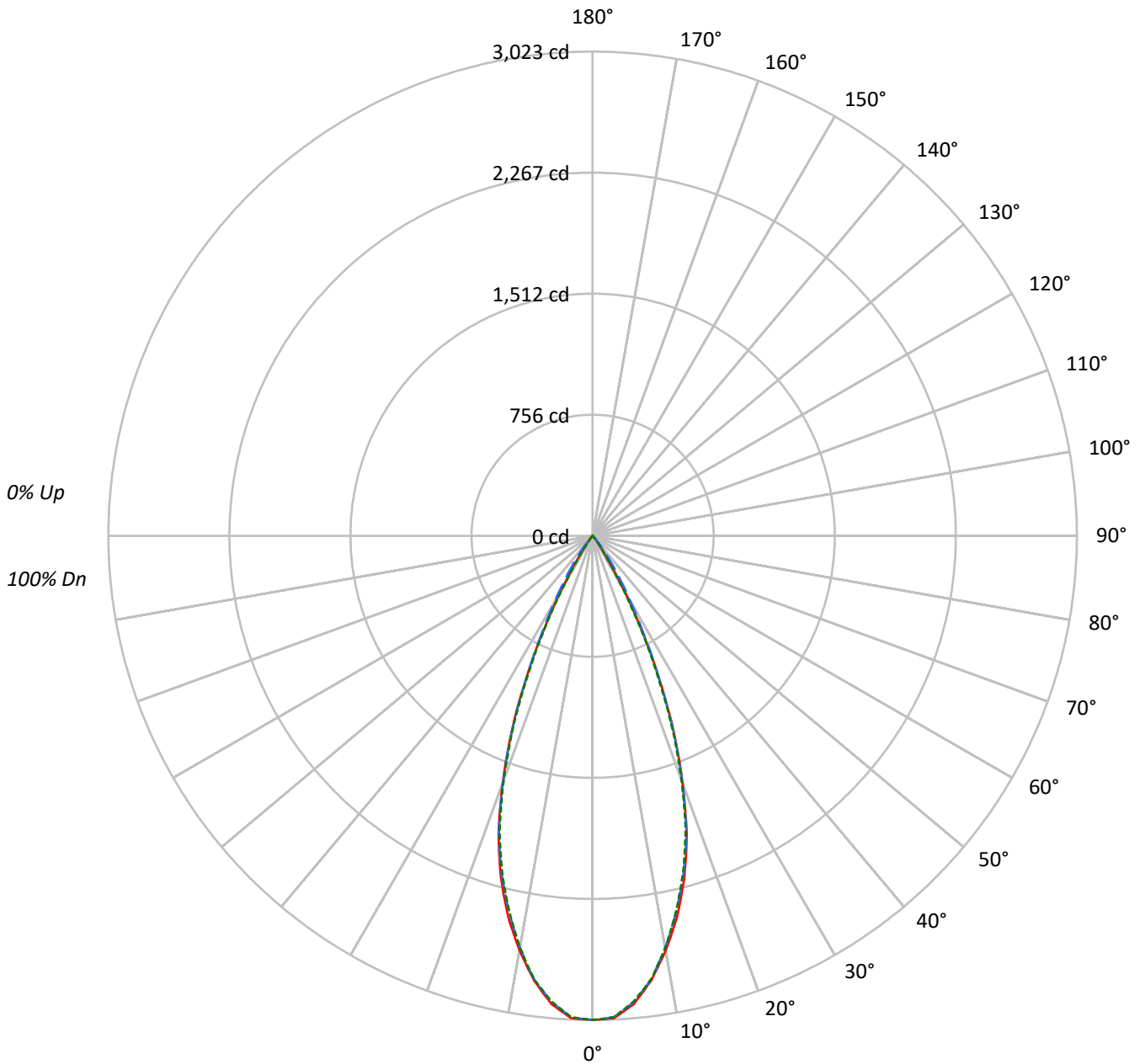
Lumens per Lamp: N/A
Luminaire Lumens: 1417.1 lumens
Efficiency: N/A
Efficacy: 102.7 lumens/watt
Spacing Criteria (0/90/45): 0.68 / 0.68 / 0.65
Luminous Opening: Rectangular (W 0.25' x L: 0.25' x H: 0')
CIE Type: Direct

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	112	110	108	112	110	108	106	106	104	103	102	101	100	99	98	97	95																			
2	110	106	103	100	108	104	101	99	101	99	97	98	96	94	96	94	93	91																			
3	106	100	96	93	104	99	95	92	97	94	91	94	92	90	92	90	88	87																			
4	102	96	91	88	100	94	90	87	92	89	86	91	88	85	89	86	84	83																			
5	98	91	86	83	96	90	86	82	88	85	82	87	84	81	85	83	80	79																			
6	94	87	82	79	93	86	82	78	85	81	78	84	80	77	82	79	77	76																			
7	91	83	78	75	90	83	78	75	81	77	74	80	77	74	79	76	74	72																			
8	87	80	75	71	86	79	74	71	78	74	71	77	73	71	76	73	70	69																			
9	84	76	72	68	83	76	71	68	75	71	68	74	71	68	74	70	68	66																			
10	81	73	69	65	80	73	68	65	72	68	65	72	68	65	71	67	65	64																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	520646	520646	520646
5°	507594	505399	504794
10°	459531	456680	456680
15°	394074	390348	388494
20°	300517	299875	297108
25°	186207	185105	180259
30°	75867	92711	67336
35°	15852	39989	14381
40°	3912	12253	3912
45°	852	3385	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: 3385 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	269.4	19.0
10°-20°	601.1	42.4
20°-30°	444.0	31.3
30°-40°	94.3	6.7
40°-50°	7.8	0.6
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°	1314.5	92.8
0°-40°	1408.8	99.4
0°-60°	1417.1	100.0
0°-90°	1417.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1417.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3023	3023	3023	3023	3023	
5°	2936	2928	2923	2922	2920	270
15°	2210	2209	2189	2182	2179	605
25°	980	986	974	973	949	442
35°	75	109	190	100	68	73
45°	4	6	14	6	5	5
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°	3023.1	3023.1	3023.1	3023.1	3023.1
2.5°	3015.0	3012.6	3009.2	3009.2	3009.2
5°	2936.1	2928.0	2923.4	2922.2	2919.9
7.5°	2800.4	2791.2	2793.5	2793.5	2793.5
10°	2627.7	2616.1	2611.4	2611.4	2611.4
12.5°	2436.3	2437.5	2407.3	2407.3	2402.7
15°	2210.2	2209.0	2189.3	2182.4	2178.9
17.5°	1953.9	1952.8	1948.1	1930.7	1929.6
20°	1639.7	1645.5	1636.2	1624.6	1621.1
22.5°	1321.9	1316.1	1312.7	1312.7	1296.4
25°	979.9	985.7	974.1	972.9	948.6
27.5°	654.0	695.8	690.0	661.0	632.0
30°	381.5	429.1	466.2	397.7	338.6
32.5°	178.6	227.3	307.3	213.4	163.5
35°	75.4	109.0	190.2	99.7	68.4
37.5°	35.9	49.9	106.7	47.5	32.5
40°	17.4	24.4	54.5	24.4	17.4
42.5°	9.3	12.8	27.8	11.6	9.3
45°	3.5	5.8	13.9	5.8	4.6
47.5°	2.3	2.3	5.8	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	0.0
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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