

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: P885915

Luminaire Tested: ML104LSFL9FS1E-TIR1D40FL-TL1SDMWB-400LM-3500K

Issue Date: 6/19/2024

Test Information

Test Method: LM-79-2019
Report Number: P885915
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2402-314-145)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 6/19/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: ML104LSFL9FS1E-TIR1D40FL-TL1SDMWB-400LM-3500K
Description: 1IN SQUARE ML FLEX, SELECTABLE CCT, WITH 40D TIR, MATTE WHITE BAFFLED TRIM
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 3500K CCT
Ballast/Driver: -

Summary

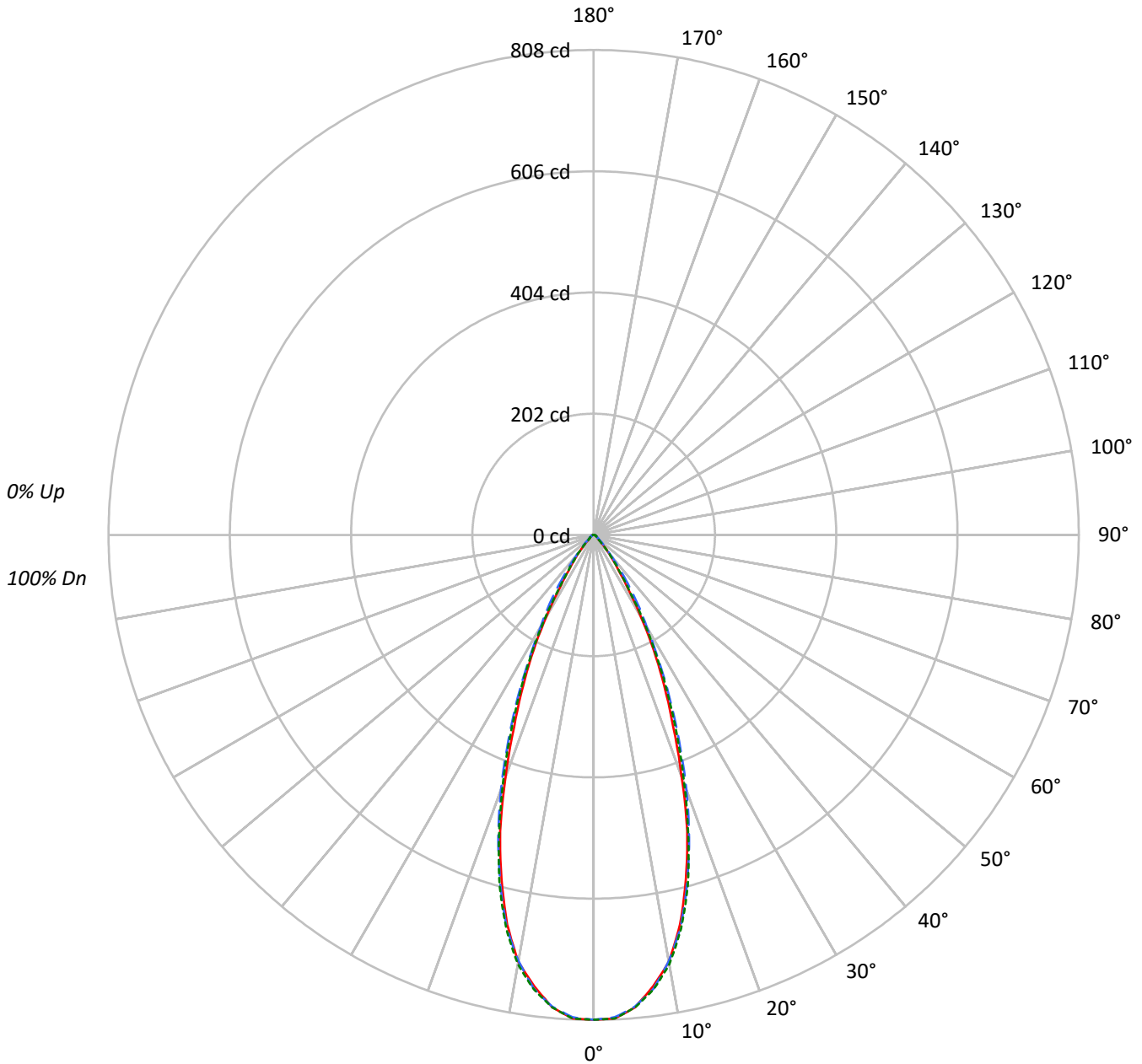
Lumens per Lamp: N/A
Luminaire Lumens: 459.5 lumens
Efficiency: N/A
Efficacy: 76.6 lumens/watt
Spacing Criteria (0/90/45): 0.68 / 0.69 / 0.68
Luminous Opening: Rectangular (W 0.08' x L: 0.08' x H: 0')
CIE Type: Direct

Input Watts (W): 6
Input Voltage (V): NR
Input Current (Ain): 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	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	91	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	81	85	82	80	78								
5	95	87	82	78	93	86	81	77	84	80	77	83	79	76	81	78	75	74								
6	91	82	77	73	89	82	76	73	80	76	72	79	75	72	78	74	71	70								
7	87	78	73	69	85	78	72	69	76	72	68	75	71	68	74	70	68	66								
8	83	74	69	65	82	74	69	65	73	68	65	72	68	65	71	67	64	63								
9	80	71	66	62	79	70	65	62	70	65	62	69	64	61	68	64	61	60								
10	77	68	62	59	76	67	62	59	67	62	59	66	62	59	65	61	58	57								

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1251948	1251948	1251948
5°	1229346	1227634	1229346
10°	1136376	1134644	1143144
15°	952226	964582	971643
20°	706973	744911	728581
25°	475451	511195	498026
30°	283147	316616	298897
35°	137186	187141	145512
40°	75675	91255	77901
45°	33758	48225	31346
50°	21220	26525	21220
55°	17836	20808	17836
60°	17050	17050	17050
65°	16138	16138	16138
70°	14955	14955	14955
75°	13175	13175	13175
80°	9819	19638	19638
85°	19563	19563	19563

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 48225 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	73.2	15.9
10°-20°	164.3	35.8
20°-30°	133.8	29.1
30°-40°	57.2	12.5
40°-50°	16.2	3.5
50°-60°	6.6	1.4
60°-70°	4.6	1.0
70°-80°	2.7	0.6
80°-90°	0.9	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°	371.3	80.8
0°-40°	428.5	93.3
0°-60°	451.3	98.2
0°-90°	459.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	459.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	808	808	808	808	808	
5°	790	789	789	789	790	73
15°	593	596	601	603	606	162
25°	278	285	299	292	291	128
35°	72	81	99	87	77	50
45°	15	19	22	19	14	14
55°	7	8	8	8	7	6
65°	4	4	4	4	4	5
75°	2	2	2	2	2	3
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°	807.7	807.7	807.7	807.7	807.7
2.5°	806.6	805.5	804.4	805.5	806.6
5°	790.1	789.0	789.0	789.0	790.1
7.5°	758.2	761.5	762.6	763.7	763.7
10°	722.0	719.8	720.9	723.1	726.3
12.5°	664.8	665.9	669.2	671.4	672.5
15°	593.4	595.6	601.1	603.3	605.5
17.5°	517.6	519.8	528.6	527.5	524.2
20°	428.6	436.2	451.6	451.6	441.7
22.5°	346.1	357.1	371.4	367.0	363.7
25°	278.0	284.6	298.9	292.3	291.2
27.5°	216.5	225.3	231.9	231.9	225.3
30°	158.2	172.5	176.9	176.9	167.0
32.5°	106.6	119.8	136.3	126.4	112.1
35°	72.5	81.3	98.9	86.8	76.9
37.5°	52.7	57.1	68.1	58.2	54.9
40°	37.4	40.7	45.1	41.8	38.5
42.5°	25.3	27.5	30.8	28.6	25.3
45°	15.4	18.7	22.0	18.7	14.3
47.5°	11.0	12.1	16.5	12.1	11.0
50°	8.8	9.9	11.0	9.9	8.8
52.5°	7.7	7.7	8.8	7.7	7.7
55°	6.6	7.7	7.7	7.7	6.6
57.5°	5.5	6.6	6.6	6.6	5.5
60°	5.5	5.5	5.5	5.5	5.5
62.5°	5.5	5.5	5.5	5.5	5.5
65°	4.4	4.4	4.4	4.4	4.4
67.5°	4.4	4.4	4.4	4.4	4.4
70°	3.3	3.3	3.3	3.3	3.3
72.5°	3.3	3.3	3.3	3.3	3.3
75°	2.2	2.2	2.2	2.2	2.2
77.5°	2.2	2.2	2.2	2.2	2.2
80°	1.1	2.2	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	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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