

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: P885961

Luminaire Tested: ML104LSFL9FS1E-TIR1D55WFL-TL1SDMB-400LM-4000K

Issue Date: 6/19/2024

Test Information

Test Method: LM-79-2019
Report Number: P885961
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2402-314-150)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 6/19/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: ML104LSFL9FS1E-TIR1D55WFL-TL1SDMB-400LM-4000K
Description: 1IN SQUARE ML FLEX, SELECTABLE CCT, WITH 55D TIR, MATTE BLACK TRIM
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 4000K CCT
Ballast/Driver: -

Summary

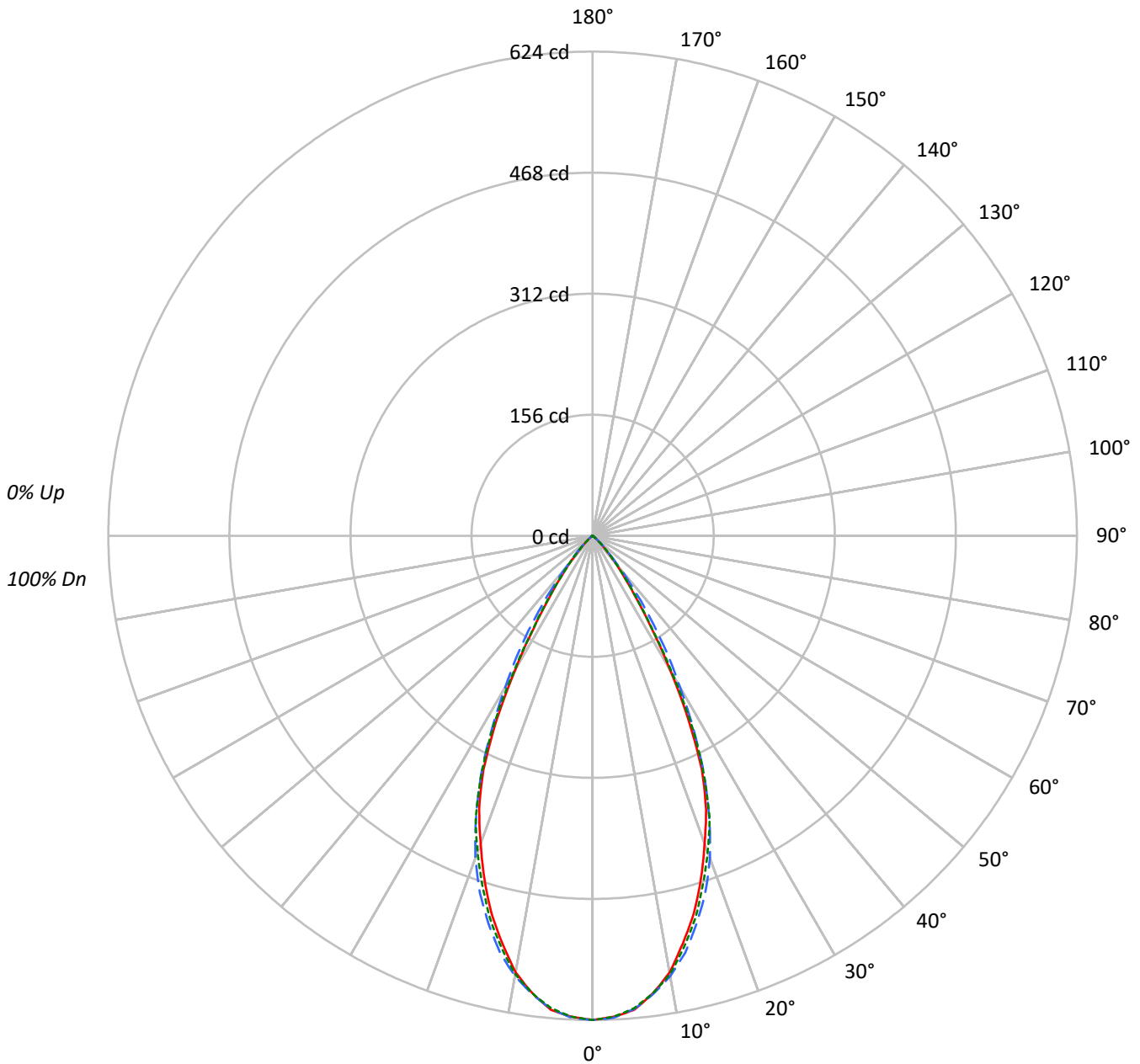
Lumens per Lamp: N/A
Luminaire Lumens: 442.2 lumens
Efficiency: N/A
Efficacy: 73.7 lumens/watt
Spacing Criteria (0/90/45): 0.81 / 0.83 / 0.8
Luminous Opening: Rectangular (W 0.08' x L: 0.08' x H: 0')
CIE Type: Direct

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	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	107	102	99	96	99	96	94	96	94	92	94	92	90	89								
3	104	98	93	89	102	96	92	89	94	90	87	91	88	86	89	87	85	83								
4	99	92	87	83	97	91	86	82	89	85	81	87	83	80	85	82	79	78								
5	94	87	81	77	93	86	81	77	84	79	76	82	78	75	81	77	75	73								
6	90	82	76	72	89	81	76	72	79	75	71	78	74	71	77	73	70	69								
7	86	77	72	68	85	77	71	68	75	71	67	74	70	67	73	69	66	65								
8	82	73	68	64	81	73	67	64	72	67	63	71	66	63	70	66	63	62								
9	79	69	64	60	77	69	64	60	68	63	60	67	63	60	66	62	60	58								
10	75	66	61	57	74	66	60	57	65	60	57	64	60	57	63	59	56	55								

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	967210	967210	967210
5°	954567	952700	950989
10°	899342	906740	903120
15°	808285	830751	819518
20°	695921	728581	715055
25°	569685	581657	579605
30°	357603	401632	370132
35°	183545	243150	190168
40°	92267	111085	92267
45°	38361	46033	38361
50°	11334	16880	13986
55°	3243	6215	3243
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: 46033 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	57.2	12.9
10°-20°	142.3	32.2
20°-30°	151.2	34.2
30°-40°	72.8	16.5
40°-50°	16.7	3.8
50°-60°	1.8	0.4
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°	350.7	79.3
0°-40°	423.6	95.8
0°-60°	442.2	100.0
0°-90°	442.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	442.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	624	624	624	624	624	
5°	614	612	612	612	611	57
15°	504	511	518	515	511	140
25°	333	335	340	347	339	147
35°	97	106	128	108	100	65
45°	18	19	21	19	18	15
55°	1	1	2	1	1	1
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°	624.0	624.0	624.0	624.0	624.0
2.5°	620.5	620.5	621.7	621.7	620.5
5°	613.5	612.3	612.3	612.3	611.2
7.5°	594.8	594.8	596.0	597.2	594.8
10°	571.4	572.6	576.1	573.8	573.8
12.5°	537.6	542.2	550.4	548.1	543.4
15°	503.7	510.7	517.7	515.4	510.7
17.5°	463.9	472.1	482.6	478.0	472.1
20°	421.9	428.9	441.7	437.1	433.5
22.5°	382.1	385.6	392.6	392.6	393.8
25°	333.1	335.4	340.1	347.1	338.9
27.5°	267.6	275.8	281.6	284.0	278.1
30°	199.8	212.7	224.4	220.9	206.8
32.5°	141.4	155.4	176.5	161.3	143.7
35°	97.0	106.3	128.5	107.5	100.5
37.5°	66.6	72.5	87.6	72.5	68.9
40°	45.6	49.1	54.9	49.1	45.6
42.5°	29.2	31.6	33.9	31.6	29.2
45°	17.5	18.7	21.0	18.7	17.5
47.5°	9.3	10.5	11.7	10.5	9.3
50°	4.7	5.8	7.0	5.8	5.8
52.5°	2.3	3.5	3.5	3.5	3.5
55°	1.2	1.2	2.3	1.2	1.2
57.5°	0.0	0.0	1.2	1.2	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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