

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: P886033

Luminaire Tested: ML104LSFLD2W1E-TIR1D40FL-TL1SDSL-200LM-4000K

Issue Date: 6/19/2024

Test Information

Test Method: LM-79-2019
Report Number: P886033
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2402-314-143)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 6/19/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: ML104LSFLD2W1E-TIR1D40FL-TL1SDSL-200LM-4000K
Description: 1IN SQUARE ML FLEX, SELECTABLE CCT, WITH 40D TIR, METALLIC SILVER TRIM
Light Source: (1) D2W LED 90CRI / 3000K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 241.0 lumens
Efficiency: N/A
Efficacy: 75.3 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

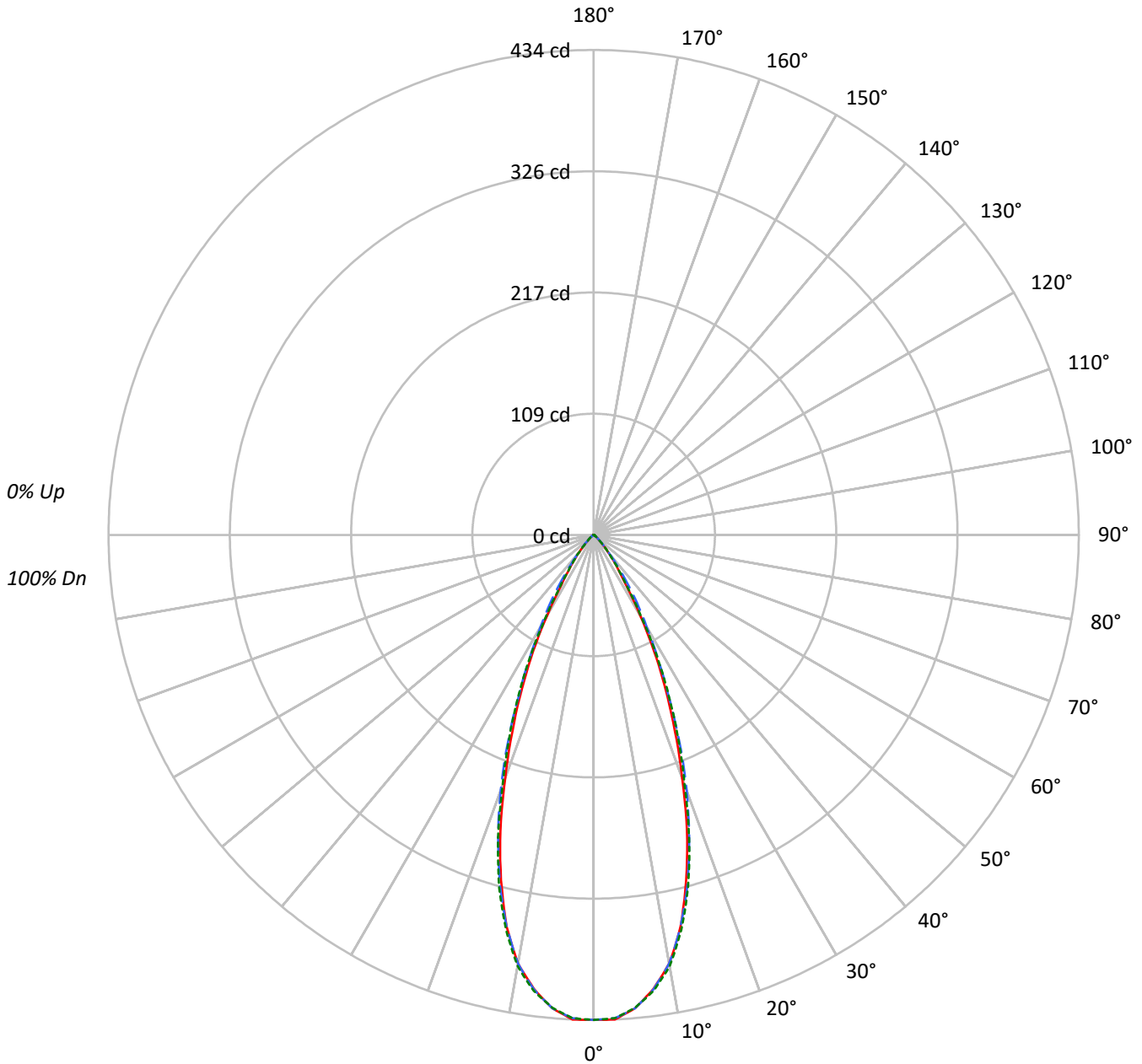
Input Watts (W): 3.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	112	109	107	112	109	107	106	105	104	102	102	100	99	98	97	96	95								
2	109	105	101	98	107	103	100	97	100	97	95	97	95	93	94	92	91	89								
3	104	99	94	91	102	97	93	90	95	91	88	92	89	87	90	88	86	84								
4	100	93	88	84	98	92	87	84	90	86	83	88	85	82	86	83	81	80								
5	96	88	83	79	94	87	82	79	85	81	78	84	80	77	82	79	77	75								
6	92	84	78	74	90	83	78	74	81	77	74	80	76	73	79	75	73	71								
7	88	79	74	70	86	79	74	70	78	73	70	76	72	69	75	72	69	68								
8	84	76	70	67	83	75	70	67	74	70	66	73	69	66	72	69	66	65								
9	81	72	67	63	80	72	67	63	71	66	63	70	66	63	69	65	63	61								
10	78	69	64	60	77	69	64	60	68	63	60	67	63	60	66	63	60	59								

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	672862	672862	672862
5°	661584	661584	660651
10°	613045	613045	616822
15°	513342	520082	523933
20°	381528	401157	392414
25°	259274	270562	272614
30°	149091	169316	156429
35°	75310	97828	77581
40°	40873	44515	40873
45°	16879	22140	18194
50°	10128	10128	10128
55°	6486	4864	6486
60°	3720	1860	3720
65°	2201	2201	4401
70°	2719	2719	2719
75°	3593	0	3593
80°	0	0	0
85°	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 22140 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	39.5	16.4
10°-20°	88.5	36.7
20°-30°	72.2	30.0
30°-40°	30.0	12.5
40°-50°	7.8	3.2
50°-60°	2.0	0.8
60°-70°	0.7	0.3
70°-80°	0.3	0.1
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°	200.2	83.1
0°-40°	230.2	95.5
0°-60°	240.0	99.6
0°-90°	241.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	241.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	434	434	434	434	434	
5°	425	425	425	426	425	39
15°	320	320	324	325	326	87
25°	152	156	158	160	159	69
35°	40	43	52	44	41	27
45°	8	9	10	9	8	7
55°	2	2	2	2	2	2
65°	1	1	1	1	1	1
75°	1	0	0	0	1	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°	434.1	434.1	434.1	434.1	434.1
2.5°	434.1	434.1	432.9	433.5	432.9
5°	425.2	425.2	425.2	425.8	424.6
7.5°	409.7	410.9	410.3	410.3	411.5
10°	389.5	389.5	389.5	390.1	391.9
12.5°	359.2	359.8	359.2	361.0	362.2
15°	319.9	320.5	324.1	325.3	326.5
17.5°	277.7	279.5	284.3	284.9	284.3
20°	231.3	236.1	243.2	241.4	237.9
22.5°	189.7	192.7	200.4	197.4	198.0
25°	151.6	155.8	158.2	160.0	159.4
27.5°	116.6	121.9	123.7	125.5	123.1
30°	83.3	89.8	94.6	94.0	87.4
32.5°	55.9	63.6	72.0	65.4	59.5
35°	39.8	43.4	51.7	44.0	41.0
37.5°	29.1	30.3	33.9	30.3	29.1
40°	20.2	21.4	22.0	21.4	20.2
42.5°	13.1	14.3	14.9	14.3	13.1
45°	7.7	8.9	10.1	8.9	8.3
47.5°	5.4	4.8	6.5	5.4	5.9
50°	4.2	3.6	4.2	4.2	4.2
52.5°	3.0	3.0	2.4	3.0	3.0
55°	2.4	1.8	1.8	1.8	2.4
57.5°	1.8	1.2	1.2	1.8	1.8
60°	1.2	1.2	0.6	1.2	1.2
62.5°	1.2	0.6	0.6	1.2	1.2
65°	0.6	0.6	0.6	0.6	1.2
67.5°	0.6	0.6	0.6	0.6	0.6
70°	0.6	0.6	0.6	0.6	0.6
72.5°	0.6	0.6	0.0	0.6	0.6
75°	0.6	0.0	0.0	0.0	0.6
77.5°	0.0	0.0	0.0	0.0	0.6
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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