

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: P885914

Luminaire Tested: ML104LSFL9FS1E-TIR1D40FL-TL1SDMWB-400LM-3000K

Issue Date: 6/19/2024

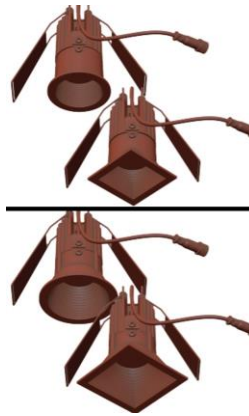
**Test Information**

Test Method: LM-79-2019  
Report Number: P885914  
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-3000K  
Description: 1IN SQUARE ML FLEX, SELECTABLE CCT, WITH 40D TIR, MATTE WHITE BAFFLED TRIM  
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 3000K CCT  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 434.2 lumens  
Efficiency: N/A  
Efficacy: 72.4 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

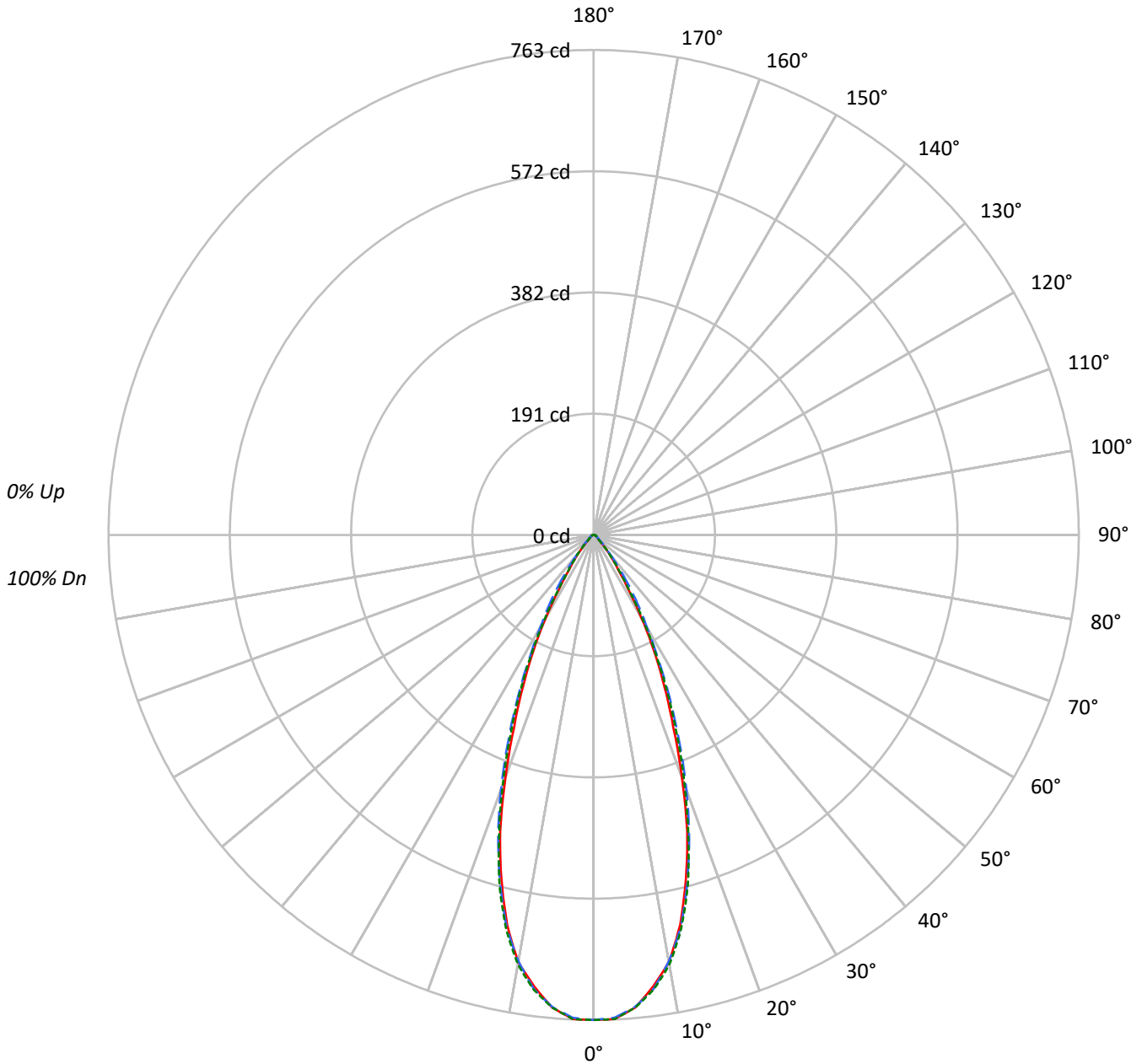
Input Watts (W): 6  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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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°	1182972	1182972	1182972
5°	1161663	1160107	1161663
10°	1073733	1072160	1080344
15°	899752	911467	918206
20°	668045	704004	688498
25°	449284	482976	470662
30°	267576	299255	282431
35°	129617	176923	137564
40°	71426	86197	73450
45°	31785	45595	29593
50°	20015	25079	20015
55°	16755	19727	16755
60°	16120	16120	16120
65°	15404	15404	15404
70°	14049	14049	14049
75°	12576	12576	12576
80°	8926	18745	18745
85°	17784	17784	17784

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 45595 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	69.2	15.9
10°-20°	155.2	35.8
20°-30°	126.5	29.1
30°-40°	54.1	12.5
40°-50°	15.3	3.5
50°-60°	6.2	1.4
60°-70°	4.4	1.0
70°-80°	2.6	0.6
80°-90°	0.8	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°	350.9	80.8
0°-40°	405.0	93.3
0°-60°	426.4	98.2
0°-90°	434.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	434.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	763	763	763	763	763	
5°	747	746	746	746	747	69
15°	561	563	568	570	572	153
25°	263	269	282	276	275	121
35°	68	77	94	82	73	48
45°	14	18	21	18	14	13
55°	6	7	7	7	6	6
65°	4	4	4	4	4	4
75°	2	2	2	2	2	2
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°	763.2	763.2	763.2	763.2	763.2
2.5°	762.2	761.2	760.1	761.2	762.2
5°	746.6	745.6	745.6	745.6	746.6
7.5°	716.5	719.6	720.7	721.7	721.7
10°	682.2	680.2	681.2	683.3	686.4
12.5°	628.2	629.3	632.4	634.5	635.5
15°	560.7	562.8	568.0	570.1	572.2
17.5°	489.1	491.2	499.5	498.4	495.3
20°	405.0	412.3	426.8	426.8	417.4
22.5°	327.1	337.5	351.0	346.8	343.7
25°	262.7	268.9	282.4	276.2	275.2
27.5°	204.6	212.9	219.1	219.1	212.9
30°	149.5	163.0	167.2	167.2	157.8
32.5°	100.7	113.2	128.8	119.4	105.9
35°	68.5	76.8	93.5	82.0	72.7
37.5°	49.8	54.0	64.4	55.0	51.9
40°	35.3	38.4	42.6	39.5	36.3
42.5°	23.9	26.0	29.1	27.0	23.9
45°	14.5	17.7	20.8	17.7	13.5
47.5°	10.4	11.4	15.6	11.4	10.4
50°	8.3	9.3	10.4	9.3	8.3
52.5°	7.3	7.3	8.3	7.3	7.3
55°	6.2	7.3	7.3	7.3	6.2
57.5°	5.2	6.2	6.2	6.2	5.2
60°	5.2	5.2	5.2	5.2	5.2
62.5°	5.2	5.2	5.2	5.2	5.2
65°	4.2	4.2	4.2	4.2	4.2
67.5°	4.2	4.2	4.2	4.2	4.2
70°	3.1	3.1	3.1	3.1	3.1
72.5°	3.1	3.1	3.1	3.1	3.1
75°	2.1	2.1	2.1	2.1	2.1
77.5°	2.1	2.1	2.1	2.1	2.1
80°	1.0	2.1	2.1	2.1	2.1
82.5°	1.0	1.0	1.0	1.0	1.0
85°	1.0	1.0	1.0	1.0	1.0
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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