

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: P885919

Luminaire Tested: ML104LSFL9FS1E-TIR1D40FL-TL1SDSL-400LM-3000K

Issue Date: 6/19/2024

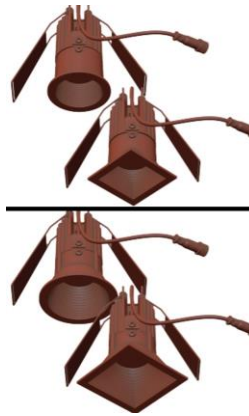
Test Information

Test Method: LM-79-2019
Report Number: P885919
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: ML104LSFL9FS1E-TIR1D40FL-TL1SDSL-400LM-3000K
Description: 1IN SQUARE ML FLEX, SELECTABLE CCT, WITH 40D TIR, METALLIC SILVER TRIM
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: -

Summary

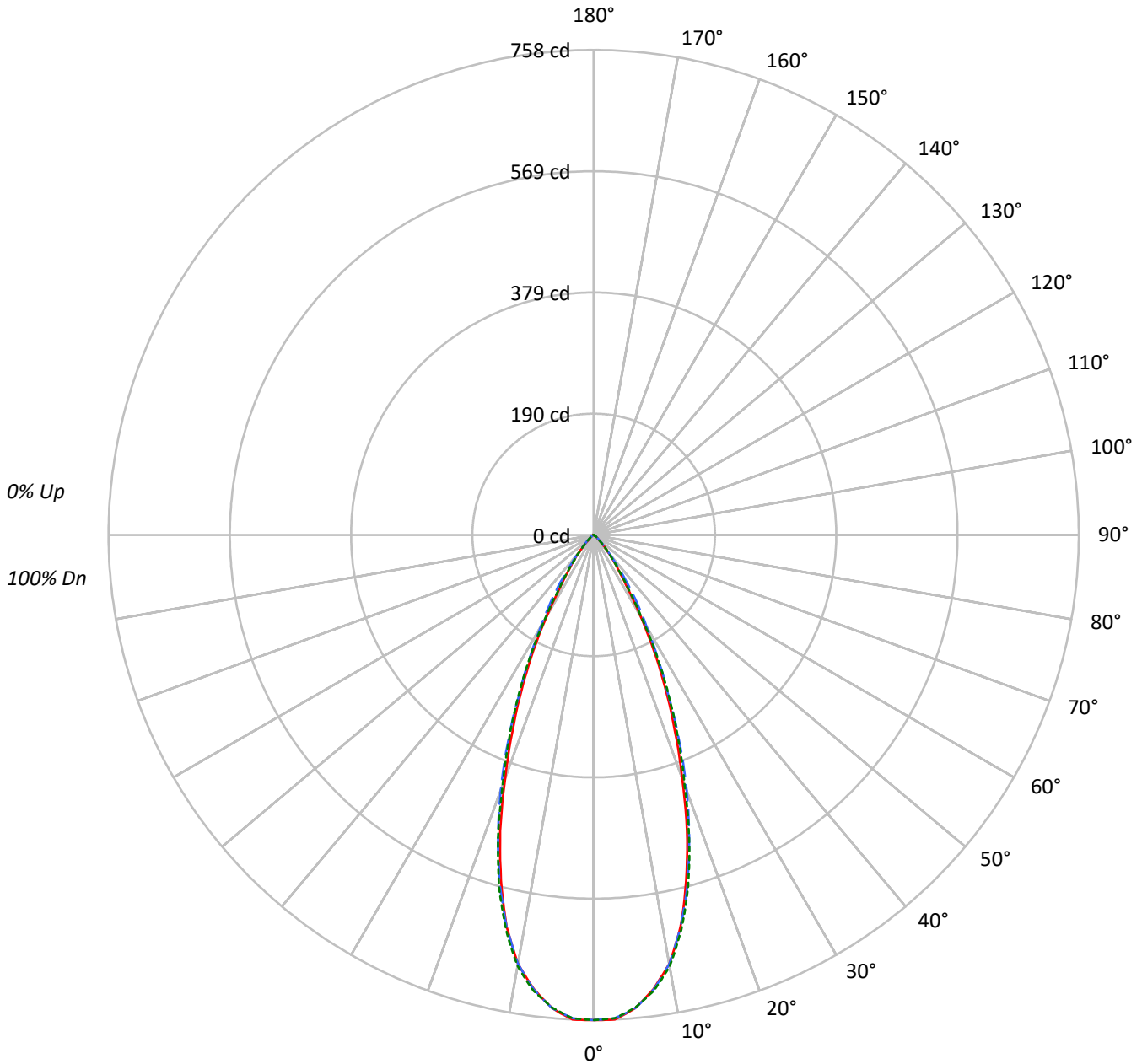
Lumens per Lamp: N/A
Luminaire Lumens: 420.9 lumens
Efficiency: N/A
Efficacy: 70.1 lumens/watt
Spacing Criteria (0/90/45): 0.68 / 0.69 / 0.68
Luminous Opening: Rectangular (W 0.08' x L: 0.08' x H: 0')
CIE Type: Direct

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	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°	1175532	1175532	1175532
5°	1155750	1155750	1154194
10°	1071058	1071058	1077511
15°	896864	908578	915157
20°	666560	700869	685529
25°	453046	472543	476135
30°	260238	295676	273303
35°	131699	171057	135672
40°	71426	77699	71426
45°	29593	38799	31785
50°	17603	17603	17603
55°	11350	8377	11350
60°	6510	3100	6510
65°	3668	3668	7702
70°	4532	4532	4532
75°	5989	0	5989
80°	0	0	0
85°	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 38799 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	68.9	16.4
10°-20°	154.6	36.7
20°-30°	126.1	30.0
30°-40°	52.5	12.5
40°-50°	13.7	3.2
50°-60°	3.4	0.8
60°-70°	1.3	0.3
70°-80°	0.4	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°	349.7	83.1
0°-40°	402.1	95.5
0°-60°	419.2	99.6
0°-90°	420.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	420.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	758	758	758	758	758	
5°	743	743	743	744	742	69
15°	559	560	566	568	570	153
25°	265	272	276	280	278	121
35°	70	76	90	77	72	47
45°	14	16	18	16	14	13
55°	4	3	3	3	4	4
65°	1	1	1	1	2	1
75°	1	0	0	0	1	1
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°	758.4	758.4	758.4	758.4	758.4
2.5°	758.4	758.4	756.3	757.3	756.3
5°	742.8	742.8	742.8	743.8	741.8
7.5°	715.8	717.9	716.8	716.8	718.9
10°	680.5	680.5	680.5	681.5	684.6
12.5°	627.5	628.5	627.5	630.6	632.7
15°	558.9	560.0	566.2	568.3	570.3
17.5°	485.2	488.3	496.6	497.6	496.6
20°	404.1	412.4	424.9	421.8	415.6
22.5°	331.4	336.6	350.1	344.9	345.9
25°	264.9	272.2	276.3	279.5	278.4
27.5°	203.6	213.0	216.1	219.2	215.0
30°	145.4	156.9	165.2	164.1	152.7
32.5°	97.7	111.2	125.7	114.3	103.9
35°	69.6	75.8	90.4	76.9	71.7
37.5°	50.9	53.0	59.2	53.0	50.9
40°	35.3	37.4	38.4	37.4	35.3
42.5°	22.9	24.9	26.0	24.9	22.9
45°	13.5	15.6	17.7	15.6	14.5
47.5°	9.3	8.3	11.4	9.3	10.4
50°	7.3	6.2	7.3	7.3	7.3
52.5°	5.2	5.2	4.2	5.2	5.2
55°	4.2	3.1	3.1	3.1	4.2
57.5°	3.1	2.1	2.1	3.1	3.1
60°	2.1	2.1	1.0	2.1	2.1
62.5°	2.1	1.0	1.0	2.1	2.1
65°	1.0	1.0	1.0	1.0	2.1
67.5°	1.0	1.0	1.0	1.0	1.0
70°	1.0	1.0	1.0	1.0	1.0
72.5°	1.0	1.0	0.0	1.0	1.0
75°	1.0	0.0	0.0	0.0	1.0
77.5°	0.0	0.0	0.0	0.0	1.0
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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