

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: P885844

Luminaire Tested: ML104LSFL9FS1E-TIR1D25NFL-TL1SDMBB-400LM-3000K

Issue Date: 6/19/2024

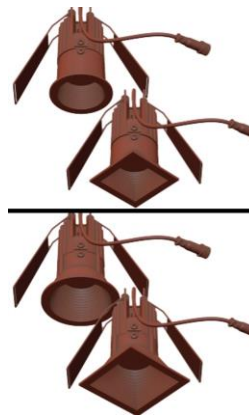
Test Information

Test Method: LM-79-2019
Report Number: P885844
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2402-314-141)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 6/19/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: ML104LSFL9FS1E-TIR1D25NFL-TL1SDMBB-400LM-3000K
Description: 1IN SQUARE ML FLEX, SELECTABLE CCT, WITH 25D TIR, MATTE BLACK BAFFLED TRIM
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 282.7 lumens
Efficiency: N/A
Efficacy: 47.1 lumens/watt
Spacing Criteria (0/90/45): 0.46 / 0.47 / 0.55
Luminous Opening: Rectangular (W 0.08' x L: 0.08' x H: 0')
CIE Type: Direct

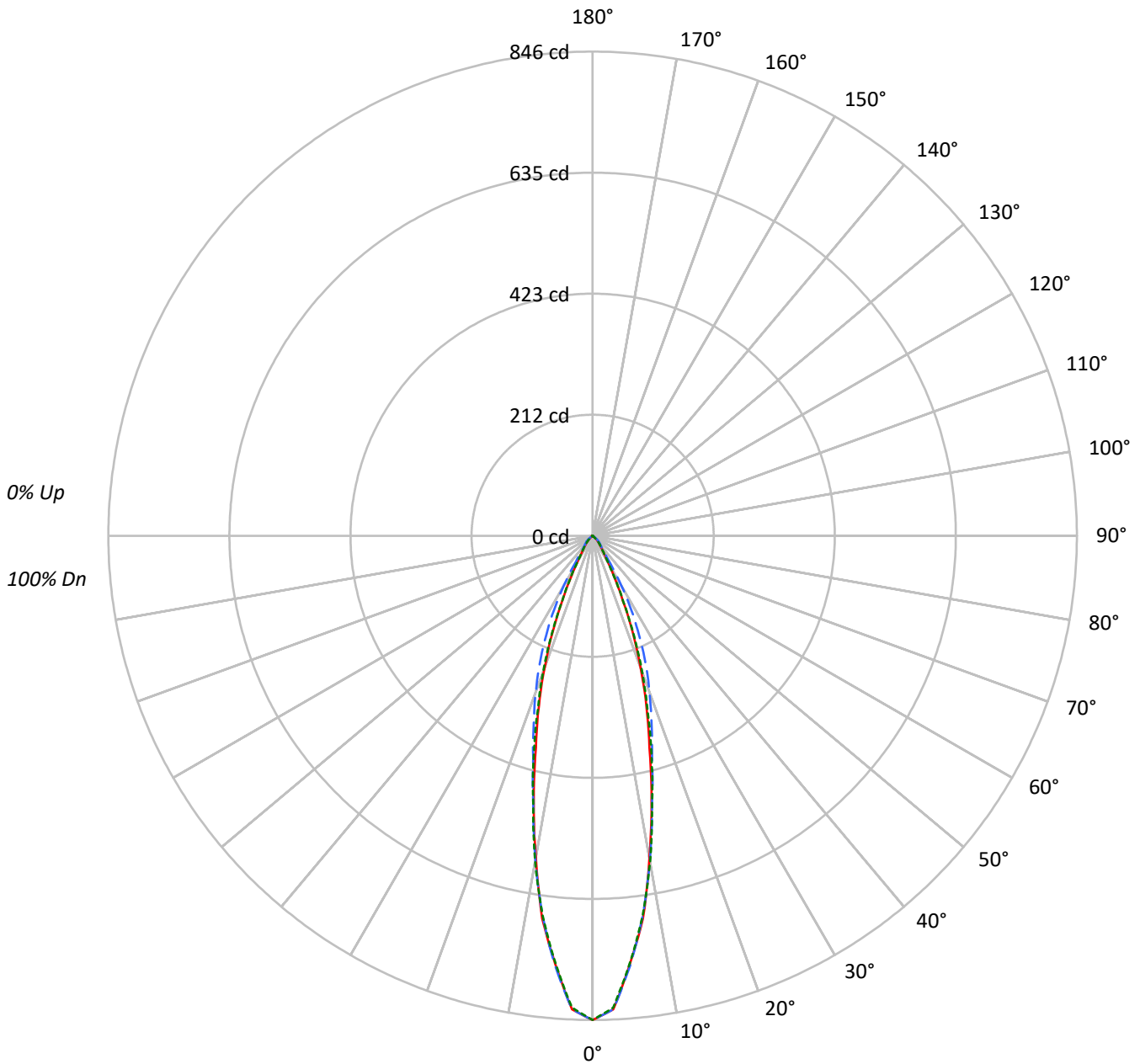
Input Watts (W): 6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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					100			
1	114	112	110	108	112	110	108	106	106	104	103	102	101	100	99	98	97	95					95			
2	110	106	102	100	108	104	101	98	101	99	96	98	96	94	95	94	92	91					91			
3	106	100	96	93	104	99	95	92	96	93	91	94	92	89	92	90	88	87					87			
4	102	95	91	87	100	94	90	87	92	89	86	90	87	85	89	86	84	83					83			
5	98	91	86	83	96	90	86	82	88	84	81	87	83	81	85	82	80	79					79			
6	94	87	82	78	93	86	81	78	85	81	78	83	80	77	82	79	77	75					75			
7	91	83	78	75	89	82	78	75	81	77	74	80	77	74	79	76	73	72					72			
8	87	80	75	71	86	79	75	71	78	74	71	77	74	71	76	73	70	69					69			
9	84	77	72	68	83	76	72	68	75	71	68	74	71	68	74	70	68	67					67			
10	82	74	69	66	81	73	69	66	73	68	66	72	68	65	71	68	65	64					64			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1311314	1311314	1311314
5°	1167420	1172399	1164308
10°	899657	906110	909415
15°	613635	643804	637064
20°	402806	478353	416497
25°	213269	328882	216860
30°	98618	178622	96649
35°	53171	64903	53171
40°	35814	44110	37838
45°	22797	34196	22797
50°	5064	25079	5064
55°	2702	2702	2702
60°	3100	0	3100
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: 34196 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.3	23.5
10°-20°	110.7	39.2
20°-30°	71.7	25.3
30°-40°	23.3	8.2
40°-50°	9.1	3.2
50°-60°	1.5	0.5
60°-70°	0.1	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°	248.7	88.0
0°-40°	272.0	96.2
0°-60°	282.6	100.0
0°-90°	282.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	282.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	846	846	846	846	846	
5°	750	754	754	748	748	66
15°	382	393	401	399	397	107
25°	125	150	192	151	127	60
35°	28	35	34	34	28	19
45°	10	11	16	12	10	7
55°	1	1	1	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°	846.0	846.0	846.0	846.0	846.0
2.5°	828.3	826.2	828.3	825.2	825.2
5°	750.3	753.5	753.5	748.3	748.3
7.5°	674.5	672.4	670.3	666.2	669.3
10°	571.6	569.5	575.7	578.9	577.8
12.5°	474.9	474.9	479.1	488.4	480.1
15°	382.4	392.8	401.2	399.1	397.0
17.5°	312.8	323.2	341.9	331.5	319.1
20°	244.2	262.9	290.0	267.1	252.5
22.5°	183.9	205.8	242.1	208.9	187.1
25°	124.7	149.7	192.3	150.7	126.8
27.5°	82.1	98.7	146.5	101.8	84.2
30°	55.1	68.6	99.8	67.6	54.0
32.5°	36.4	49.9	58.2	48.8	37.4
35°	28.1	35.3	34.3	34.3	28.1
37.5°	21.8	26.0	26.0	24.9	22.9
40°	17.7	18.7	21.8	18.7	18.7
42.5°	13.5	15.6	18.7	15.6	14.5
45°	10.4	11.4	15.6	12.5	10.4
47.5°	3.1	7.3	13.5	7.3	3.1
50°	2.1	2.1	10.4	2.1	2.1
52.5°	2.1	1.0	5.2	1.0	2.1
55°	1.0	1.0	1.0	1.0	1.0
57.5°	1.0	1.0	1.0	1.0	1.0
60°	1.0	0.0	0.0	1.0	1.0
62.5°	1.0	0.0	0.0	0.0	1.0
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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