

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: P885841

Luminaire Tested: ML104LSFL9FS1E-TIR1D25NFL-TL1SDMB-400LM-4000K

Issue Date: 6/19/2024

Test Information

Test Method: LM-79-2019
Report Number: P885841
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2402-314-138)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 6/19/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: ML104LSFL9FS1E-TIR1D25NFL-TL1SDMB-400LM-4000K
Description: 1IN SQUARE ML FLEX, SELECTABLE CCT, WITH 25D TIR, MATTE BLACK TRIM
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 4000K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 305.5 lumens
Efficiency: N/A
Efficacy: 50.9 lumens/watt
Spacing Criteria (0/90/45): 0.46 / 0.47 / 0.54
Luminous Opening: Rectangular (W 0.08' x L: 0.08' x H: 0')
CIE Type: Direct

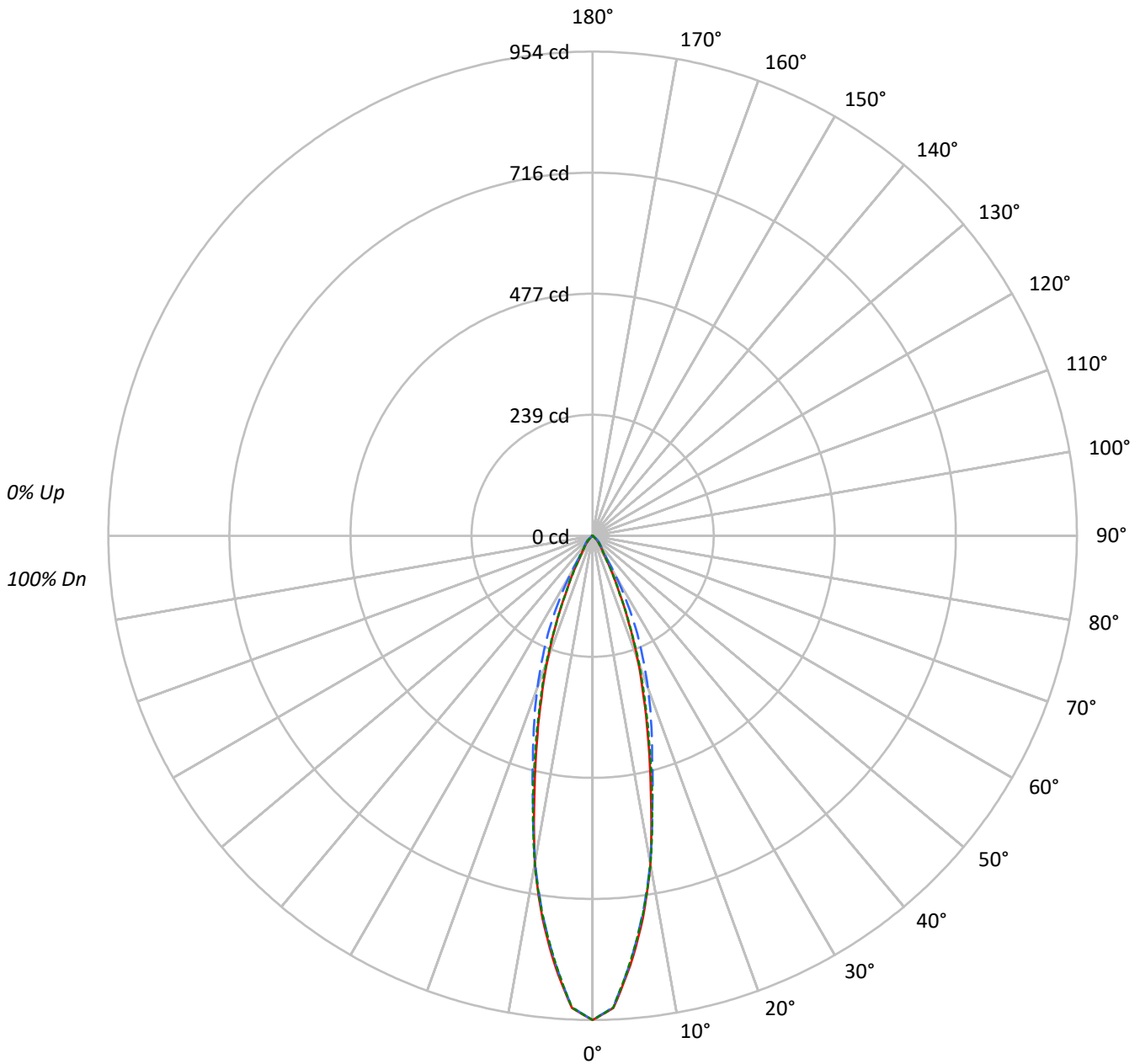
Input Watts (W): 6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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									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	115	112	110	108	112	110	108	106	106	105	103	102	101	100	99	98	97	96																			
2	110	106	103	100	108	104	101	99	101	99	97	98	96	95	96	94	93	91																			
3	106	101	97	93	104	99	96	93	97	94	91	94	92	90	92	90	88	87																			
4	102	96	91	88	100	95	91	87	93	89	86	91	88	85	89	87	84	83																			
5	98	91	87	83	97	91	86	83	89	85	82	87	84	81	86	83	81	80																			
6	95	87	83	79	93	87	82	79	85	81	78	84	81	78	83	80	77	76																			
7	91	84	79	76	90	83	79	75	82	78	75	81	77	75	80	77	74	73																			
8	88	80	76	72	87	80	75	72	79	75	72	78	74	72	77	74	71	70																			
9	85	77	73	69	84	77	72	69	76	72	69	75	72	69	75	71	69	68																			
10	82	75	70	67	81	74	70	67	73	69	67	73	69	66	72	69	66	65																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1478715	1478715	1478715
5°	1322235	1314922	1313211
10°	1031710	1028090	1033598
15°	681835	726927	694993
20°	426724	523219	438270
25°	216176	342393	216176
30°	96291	157145	98439
35°	57523	64146	57523
40°	37838	47348	40266
45°	17975	35950	20605
50°	5546	22667	5546
55°	3243	3243	3243
60°	3720	0	3720
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: 35950 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	74.9	24.5
10°-20°	123.0	40.3
20°-30°	73.5	24.1
30°-40°	23.7	7.8
40°-50°	9.1	3.0
50°-60°	1.2	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°	271.4	88.8
0°-40°	295.1	96.6
0°-60°	305.5	100.0
0°-90°	305.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	305.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	954	954	954	954	954	
5°	850	852	845	846	844	75
15°	425	438	453	444	433	118
25°	126	148	200	153	126	61
35°	30	36	34	36	30	20
45°	8	12	16	12	9	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°	954.0	954.0	954.0	954.0	954.0
2.5°	931.7	930.6	929.4	930.6	930.6
5°	849.8	852.1	845.1	846.3	844.0
7.5°	759.7	757.3	752.7	756.2	755.0
10°	655.5	648.5	653.2	653.2	656.7
12.5°	530.3	540.8	543.1	542.0	542.0
15°	424.9	437.8	453.0	443.6	433.1
17.5°	334.8	355.8	382.8	361.7	343.0
20°	258.7	279.8	317.2	283.3	265.7
22.5°	187.3	213.0	256.3	215.4	189.6
25°	126.4	147.5	200.2	153.3	126.4
27.5°	85.4	100.7	140.5	101.8	84.3
30°	53.8	72.6	87.8	71.4	55.0
32.5°	38.6	51.5	49.2	51.5	39.8
35°	30.4	36.3	33.9	36.3	30.4
37.5°	23.4	26.9	28.1	26.9	24.6
40°	18.7	19.9	23.4	21.1	19.9
42.5°	14.0	16.4	19.9	16.4	15.2
45°	8.2	11.7	16.4	11.7	9.4
47.5°	2.3	5.9	14.0	5.9	2.3
50°	2.3	1.2	9.4	1.2	2.3
52.5°	1.2	1.2	3.5	1.2	1.2
55°	1.2	1.2	1.2	1.2	1.2
57.5°	1.2	0.0	0.0	1.2	1.2
60°	1.2	0.0	0.0	0.0	1.2
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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