

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: P885854

Luminaire Tested: ML104LSFL9FS1E-TIR1D25NFL-TL1SDMWB-400LM-3000K

Issue Date: 6/19/2024

Test Information

Test Method: LM-79-2019
Report Number: P885854
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2402-314-139)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 6/19/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: ML104LSFL9FS1E-TIR1D25NFL-TL1SDMWB-400LM-3000K
Description: 1IN SQUARE ML FLEX, SELECTABLE CCT, WITH 25D TIR, MATTE WHITE BAFFLED TRIM
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: -

Summary

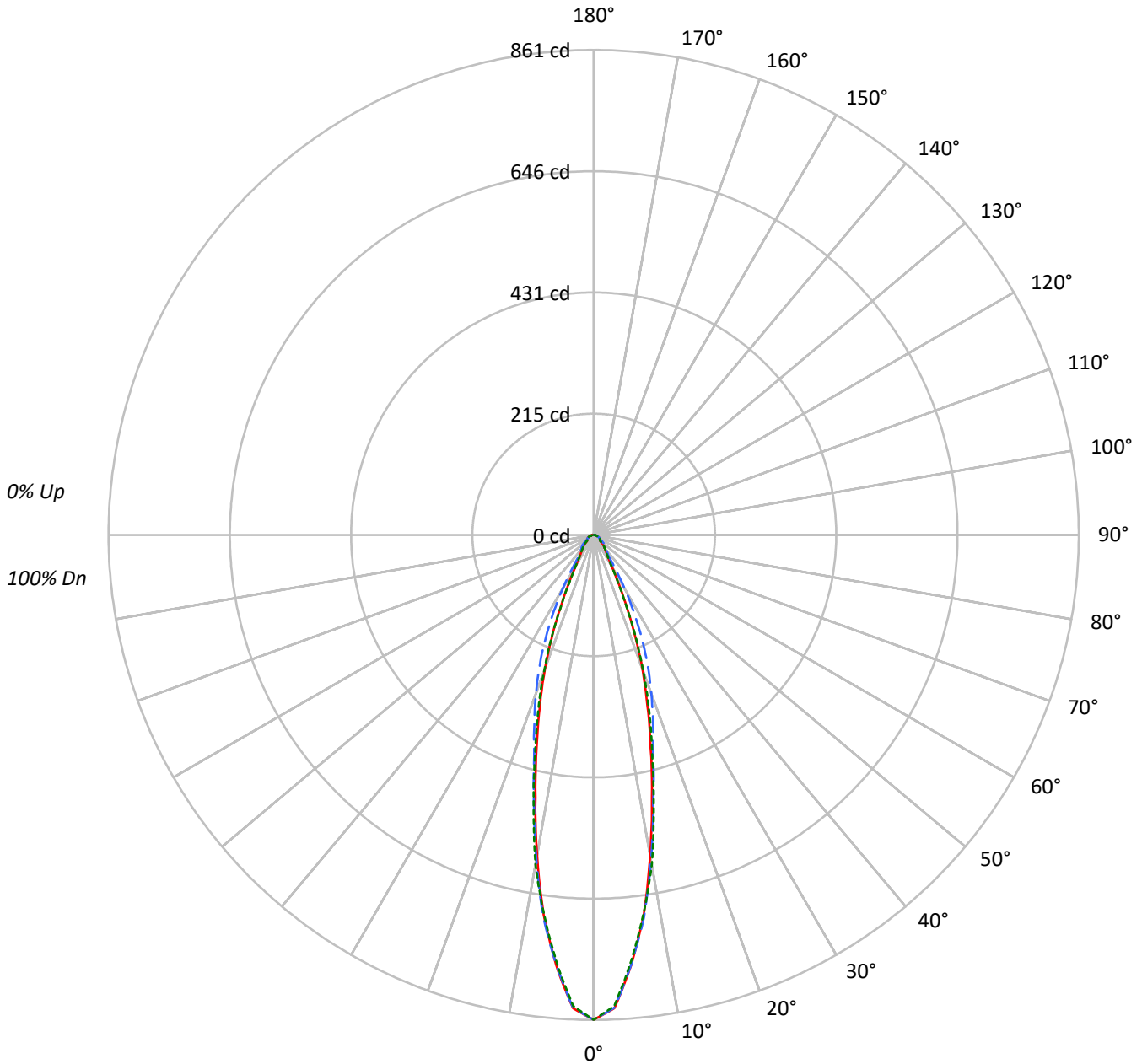
Lumens per Lamp: N/A
Luminaire Lumens: 335.2 lumens
Efficiency: N/A
Efficacy: 55.9 lumens/watt
Spacing Criteria (0/90/45): 0.46 / 0.47 / 0.56
Luminous Opening: Rectangular (W 0.08' x L: 0.08' x H: 0')
CIE Type: Direct

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	113	110	108	105	111	108	106	104	104	102	101	100	99	98	97	96	95	93																			
2	108	103	99	95	105	101	97	94	98	95	92	95	92	90	92	90	88	86																			
3	102	96	91	87	100	95	90	86	92	88	85	90	86	84	87	85	82	81																			
4	98	90	85	81	96	89	84	80	87	83	79	85	81	78	83	80	77	76																			
5	93	85	80	75	92	84	79	75	83	78	74	81	77	74	79	76	73	72																			
6	89	81	75	71	88	80	75	71	79	74	70	77	73	70	76	72	69	68																			
7	86	77	71	67	84	76	71	67	75	70	67	74	69	66	73	69	66	65																			
8	82	73	68	64	81	73	67	64	72	67	63	71	66	63	70	66	63	62																			
9	79	70	65	61	78	70	64	61	69	64	61	68	63	60	67	63	60	59																			
10	76	67	62	58	75	67	62	58	66	61	58	65	61	58	64	61	58	56																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1334254	1334254	1334254
5°	1192315	1190759	1182668
10°	908628	921692	934756
15°	626473	653111	643162
20°	416167	493198	424744
25°	227293	344445	223701
30°	113295	195089	111505
35°	74743	88367	74743
40°	60904	71426	60904
45°	47787	63789	49979
50°	37618	54980	37618
55°	39184	36482	39184
60°	38750	38750	38750
65°	38144	38144	38144
70°	33083	33083	33083
75°	31142	31142	31142
80°	27671	27671	27671
85°	17784	17784	17784

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 63789 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	67.4	20.1
10°-20°	112.9	33.7
20°-30°	75.2	22.4
30°-40°	30.6	9.1
40°-50°	19.3	5.8
50°-60°	13.0	3.9
60°-70°	10.0	3.0
70°-80°	5.5	1.6
80°-90°	1.3	0.4
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°	255.4	76.2
0°-40°	286.1	85.4
0°-60°	318.4	95.0
0°-90°	335.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	335.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	861	861	861	861	861	
5°	766	764	765	763	760	67
15°	390	400	407	408	401	109
25°	133	156	201	159	131	63
35°	40	47	47	46	40	26
45°	22	25	29	26	23	17
55°	14	14	14	14	14	13
65°	10	10	10	10	10	10
75°	5	5	5	5	5	5
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°	860.8	860.8	860.8	860.8	860.8
2.5°	841.1	842.1	840.0	839.0	836.9
5°	766.3	764.2	765.3	763.2	760.1
7.5°	680.1	678.1	684.3	680.1	678.1
10°	577.3	579.4	585.6	584.6	593.9
12.5°	477.6	483.9	489.1	490.1	492.2
15°	390.4	399.8	407.0	408.1	400.8
17.5°	316.7	333.3	349.9	338.5	327.1
20°	252.3	271.0	299.0	275.2	257.5
22.5°	189.0	210.8	250.2	217.0	192.1
25°	132.9	155.8	201.4	158.9	130.8
27.5°	91.4	107.0	153.7	110.1	88.3
30°	63.3	78.9	109.0	78.9	62.3
32.5°	46.7	61.3	70.6	59.2	47.8
35°	39.5	46.7	46.7	45.7	39.5
37.5°	34.3	37.4	39.5	37.4	34.3
40°	30.1	32.2	35.3	32.2	30.1
42.5°	27.0	29.1	32.2	29.1	27.0
45°	21.8	24.9	29.1	26.0	22.8
47.5°	15.6	19.7	27.0	20.8	15.6
50°	15.6	15.6	22.8	15.6	15.6
52.5°	14.5	14.5	17.7	14.5	14.5
55°	14.5	14.5	13.5	14.5	14.5
57.5°	13.5	13.5	13.5	13.5	13.5
60°	12.5	12.5	12.5	12.5	12.5
62.5°	11.4	11.4	11.4	11.4	11.4
65°	10.4	10.4	10.4	10.4	10.4
67.5°	8.3	9.3	8.3	9.3	9.3
70°	7.3	7.3	7.3	7.3	7.3
72.5°	6.2	6.2	6.2	6.2	6.2
75°	5.2	5.2	5.2	5.2	5.2
77.5°	4.2	4.2	4.2	4.2	4.2
80°	3.1	3.1	3.1	3.1	3.1
82.5°	2.1	2.1	2.1	2.1	2.1
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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