

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: P885968

Luminaire Tested: ML104LSFL9FS1E-TIR1D55WFL-TL1SDMW-400LM-2700K

Issue Date: 6/19/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P885968  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2402-314-148)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 6/19/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO  
Catalog Number: ML104LSFL9FS1E-TIR1D55WFL-TL1SDMW-400LM-2700K  
Description: 1IN SQUARE ML FLEX, SELECTABLE CCT, WITH 55D TIR, MATTE WHITE TRIM  
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 2700K CCT  
Ballast/Driver: -

**Summary**

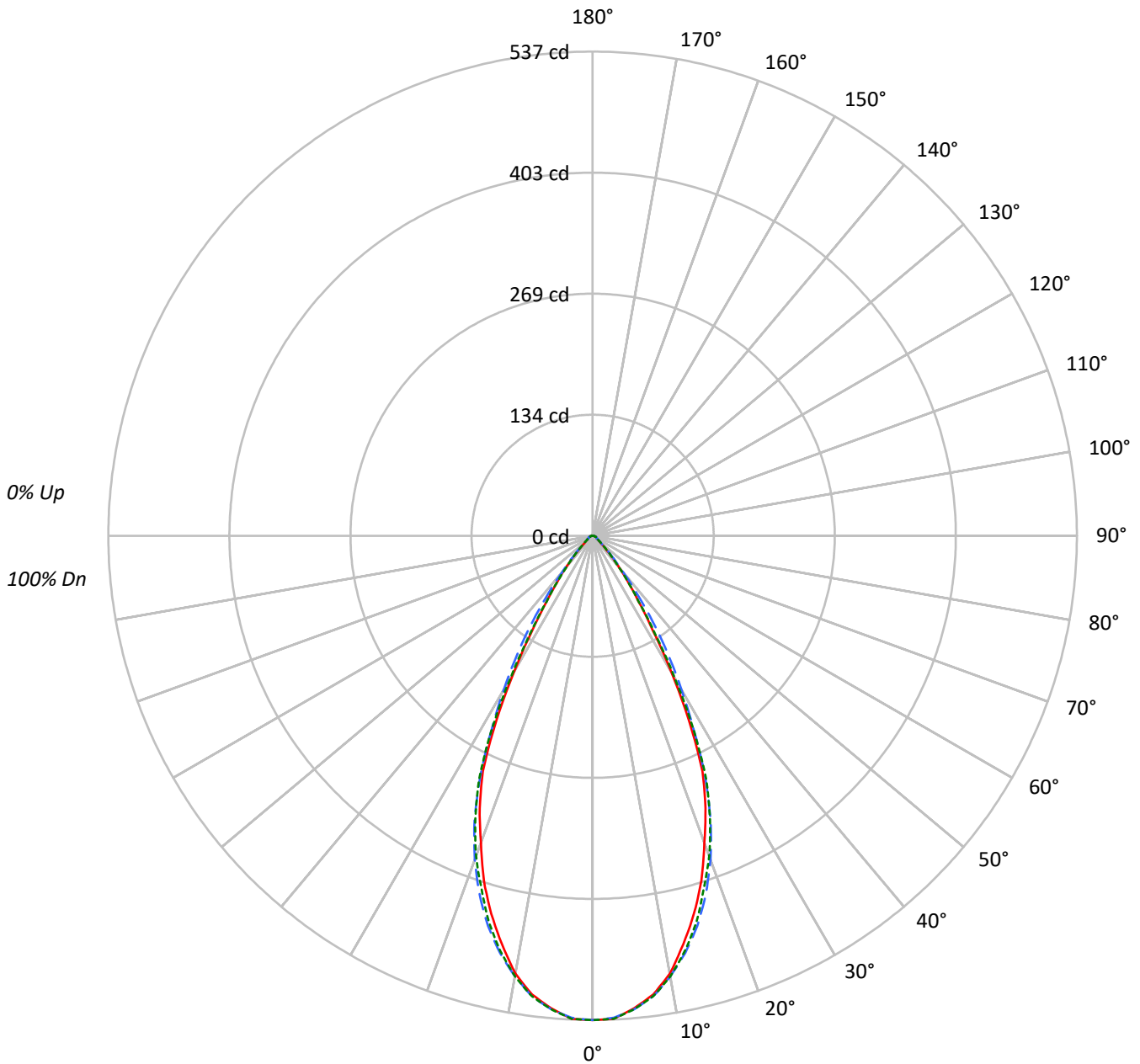
Lumens per Lamp: N/A  
Luminaire Lumens: 402.8 lumens  
Efficiency: N/A  
Efficacy: 67.1 lumens/watt  
Spacing Criteria (0/90/45): 0.8 / 0.83 / 0.8  
Luminous Opening: Rectangular (W 0.08' x L: 0.08' x H: 0')  
CIE Type: Direct

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	111	108	106	111	108	106	104	104	103	101	101	99	98	97	96	95	93																			
2	108	103	99	96	106	101	98	94	98	95	92	95	93	90	92	90	89	87																			
3	103	96	91	87	101	95	90	87	92	88	85	90	87	84	87	85	83	81																			
4	98	90	85	80	96	89	84	80	87	82	79	85	81	78	83	80	77	76																			
5	93	85	79	75	91	84	78	74	82	77	74	80	76	73	79	75	72	71																			
6	88	80	74	70	87	79	73	69	77	73	69	76	72	68	75	71	68	67																			
7	84	75	69	65	83	75	69	65	73	68	65	72	68	64	71	67	64	63																			
8	80	71	65	61	79	71	65	61	69	64	61	68	64	61	68	63	60	59																			
9	77	67	62	58	76	67	61	58	66	61	57	65	61	57	64	60	57	56																			
10	73	64	58	55	72	64	58	55	63	58	54	62	57	54	61	57	54	53																			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	832669	832669	832669
5°	818734	820290	820290
10°	776261	780983	780983
15°	696598	719064	712645
20°	597281	630271	623673
25°	492724	504696	509827
30°	311605	352770	325923
35°	166515	219498	168408
40°	93077	105217	89030
45°	43841	50417	46033
50°	24114	26525	26525
55°	18917	18917	18917
60°	15500	15500	15500
65°	14671	18338	14671
70°	18128	18128	18128
75°	17966	17966	17966
80°	17852	17852	17852
85°	17784	17784	17784

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 50417 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	49.4	12.3
10°-20°	123.1	30.6
20°-30°	131.2	32.6
30°-40°	65.6	16.3
40°-50°	18.7	4.6
50°-60°	6.6	1.6
60°-70°	4.5	1.1
70°-80°	2.9	0.7
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°	303.7	75.4
0°-40°	369.3	91.7
0°-60°	394.5	98.0
0°-90°	402.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	402.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	537	537	537	537	537	
5°	526	527	527	527	527	49
15°	434	439	448	445	444	121
25°	288	291	295	298	298	126
35°	88	97	116	98	89	59
45°	20	21	23	22	21	17
55°	7	7	7	7	7	6
65°	4	5	5	5	4	4
75°	3	3	3	3	3	3
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°	537.2	537.2	537.2	537.2	537.2
2.5°	536.2	535.2	535.2	536.2	536.2
5°	526.2	527.2	527.2	527.2	527.2
7.5°	513.2	514.2	515.2	516.2	515.2
10°	493.2	494.2	496.2	498.2	496.2
12.5°	464.1	469.1	474.1	473.1	472.1
15°	434.1	439.1	448.1	445.1	444.1
17.5°	401.1	407.1	417.1	416.1	410.1
20°	362.1	371.1	382.1	379.1	378.1
22.5°	327.1	334.1	342.1	343.1	340.1
25°	288.1	291.1	295.1	298.1	298.1
27.5°	231.1	240.1	243.1	246.1	242.1
30°	174.1	186.1	197.1	194.1	182.1
32.5°	124.0	139.0	155.0	144.0	129.0
35°	88.0	97.0	116.0	98.0	89.0
37.5°	64.0	67.0	80.0	68.0	64.0
40°	46.0	47.0	52.0	47.0	44.0
42.5°	31.0	33.0	35.0	33.0	31.0
45°	20.0	21.0	23.0	22.0	21.0
47.5°	13.0	14.0	15.0	15.0	15.0
50°	10.0	10.0	11.0	12.0	11.0
52.5°	8.0	8.0	9.0	9.0	8.0
55°	7.0	7.0	7.0	7.0	7.0
57.5°	6.0	6.0	6.0	6.0	6.0
60°	5.0	5.0	5.0	5.0	5.0
62.5°	5.0	5.0	5.0	5.0	5.0
65°	4.0	5.0	5.0	5.0	4.0
67.5°	4.0	4.0	4.0	4.0	4.0
70°	4.0	4.0	4.0	4.0	4.0
72.5°	3.0	3.0	3.0	3.0	3.0
75°	3.0	3.0	3.0	3.0	3.0
77.5°	2.0	2.0	2.0	2.0	2.0
80°	2.0	2.0	2.0	2.0	2.0
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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