

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: P885962

Luminaire Tested: ML104LSFL9FS1E-TIR1D55WFL-TL1SDMB-400LM-5000K

Issue Date: 6/19/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P885962  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2402-314-150)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 6/19/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO  
Catalog Number: ML104LSFL9FS1E-TIR1D55WFL-TL1SDMB-400LM-5000K  
Description: 1IN SQUARE ML FLEX, SELECTABLE CCT, WITH 55D TIR, MATTE BLACK TRIM  
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 5000K CCT  
Ballast/Driver: -

**Summary**

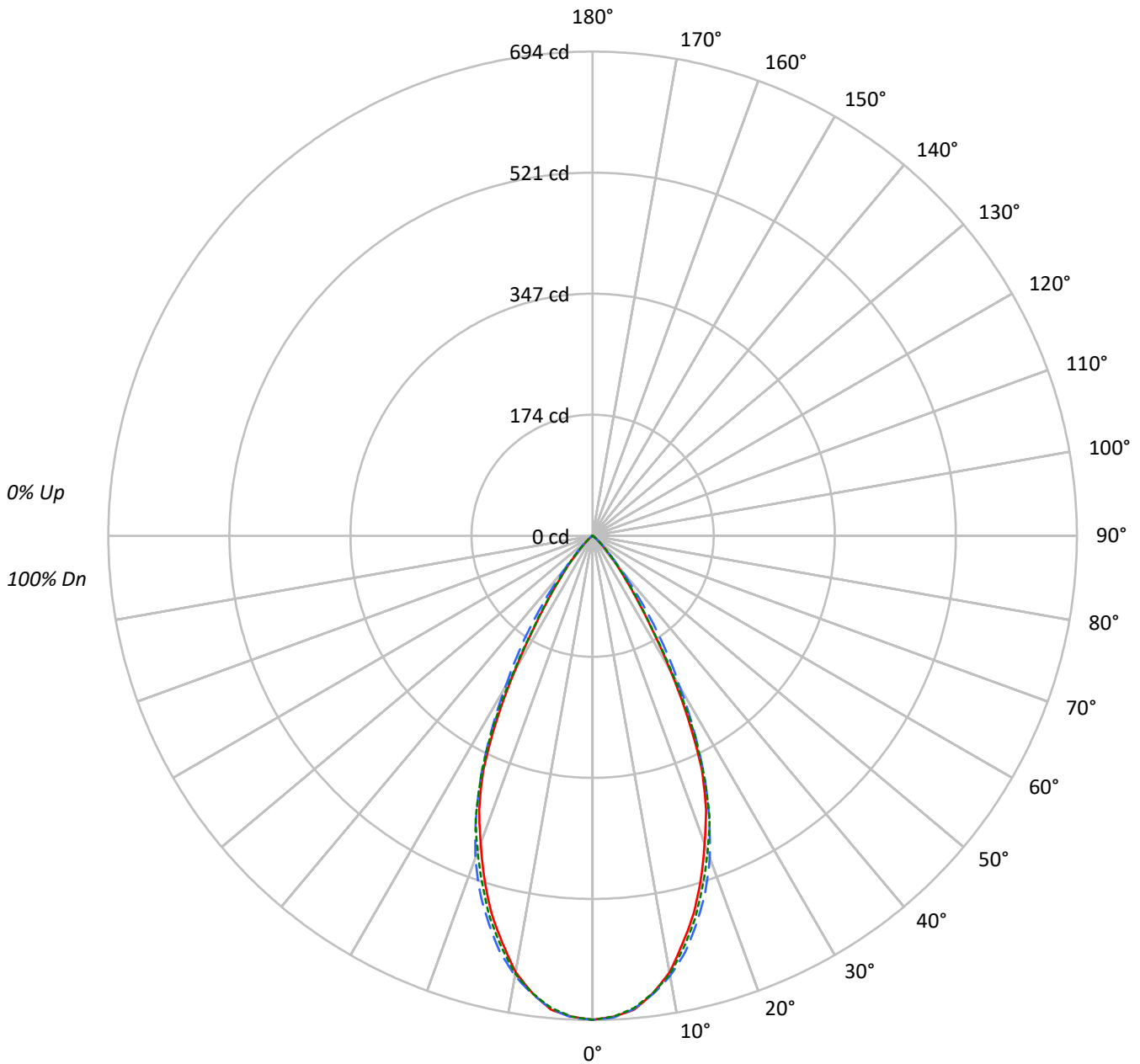
Lumens per Lamp: N/A  
Luminaire Lumens: 491.5 lumens  
Efficiency: N/A  
Efficacy: 81.9 lumens/watt  
Spacing Criteria (0/90/45): 0.81 / 0.83 / 0.8  
Luminous Opening: Rectangular (W 0.08' x L: 0.08' x H: 0')  
CIE Type: Direct

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					70					50					30				
RW	70	50	30	10	70	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	111	109	107	111	109	107	105	105	103	102	101	100	99	98	97	96	94		
2	109	104	100	97	107	102	99	96	99	96	94	96	94	92	94	92	90	89		
3	104	98	93	89	102	96	92	89	94	90	87	91	88	86	89	87	85	83		
4	99	92	87	83	97	91	86	82	89	85	81	87	83	80	85	82	79	78		
5	94	87	81	77	93	86	81	77	84	79	76	82	78	75	81	77	75	73		
6	90	82	76	72	89	81	76	72	79	75	71	78	74	71	77	73	70	69		
7	86	77	72	68	85	77	71	68	75	71	67	74	70	67	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	69	64	60	77	69	64	60	68	63	60	67	63	60	66	62	60	58		
10	75	66	61	57	74	66	60	57	65	60	57	64	60	57	63	59	56	55		

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

	0°	45°	90°
0°	1075246	1075246	1075246
5°	1061149	1059126	1057104
10°	999759	1007943	1003851
15°	898469	923341	910985
20°	773447	809901	794891
25°	633136	646476	644253
30°	397516	446377	411476
35°	203981	270398	211361
40°	102587	123630	102587
45°	42745	51294	42745
50°	12539	18809	15674
55°	3513	7026	3513
60°	0	0	0
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: 51294 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	63.6	12.9
10°-20°	158.2	32.2
20°-30°	168.1	34.2
30°-40°	81.0	16.5
40°-50°	18.6	3.8
50°-60°	2.0	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°	389.9	79.3
0°-40°	470.8	95.8
0°-60°	491.5	100.0
0°-90°	491.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	491.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	694	694	694	694	694	
5°	682	681	681	681	679	64
15°	560	568	575	573	568	155
25°	370	373	378	386	377	163
35°	108	118	143	120	112	73
45°	20	21	23	21	20	17
55°	1	1	3	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°	693.7	693.7	693.7	693.7	693.7
2.5°	689.8	689.8	691.1	691.1	689.8
5°	682.0	680.7	680.7	680.7	679.4
7.5°	661.2	661.2	662.5	663.8	661.2
10°	635.2	636.5	640.4	637.8	637.8
12.5°	597.5	602.7	611.8	609.2	604.0
15°	559.9	567.7	575.4	572.8	567.7
17.5°	515.7	524.8	536.5	531.3	524.8
20°	468.9	476.7	491.0	485.8	481.9
22.5°	424.8	428.7	436.5	436.5	437.8
25°	370.2	372.8	378.0	385.8	376.7
27.5°	297.5	306.6	313.1	315.7	309.2
30°	222.1	236.4	249.4	245.5	229.9
32.5°	157.2	172.8	196.1	179.3	159.8
35°	107.8	118.2	142.9	119.5	111.7
37.5°	74.0	80.5	97.4	80.5	76.6
40°	50.7	54.6	61.1	54.6	50.7
42.5°	32.5	35.1	37.7	35.1	32.5
45°	19.5	20.8	23.4	20.8	19.5
47.5°	10.4	11.7	13.0	11.7	10.4
50°	5.2	6.5	7.8	6.5	6.5
52.5°	2.6	3.9	3.9	3.9	3.9
55°	1.3	1.3	2.6	1.3	1.3
57.5°	0.0	0.0	1.3	1.3	0.0
60°	0.0	0.0	0.0	0.0	0.0
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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