

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: P885970

Luminaire Tested: ML104LSFL9FS1E-TIR1D55WFL-TL1SDMW-400LM-3500K

Issue Date: 6/19/2024

Test Information

Test Method: LM-79-2019
Report Number: P885970
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-3500K
Description: 1IN SQUARE ML FLEX, SELECTABLE CCT, WITH 55D TIR, MATTE WHITE TRIM
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 3500K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 442.6 lumens
Efficiency: N/A
Efficacy: 73.8 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')

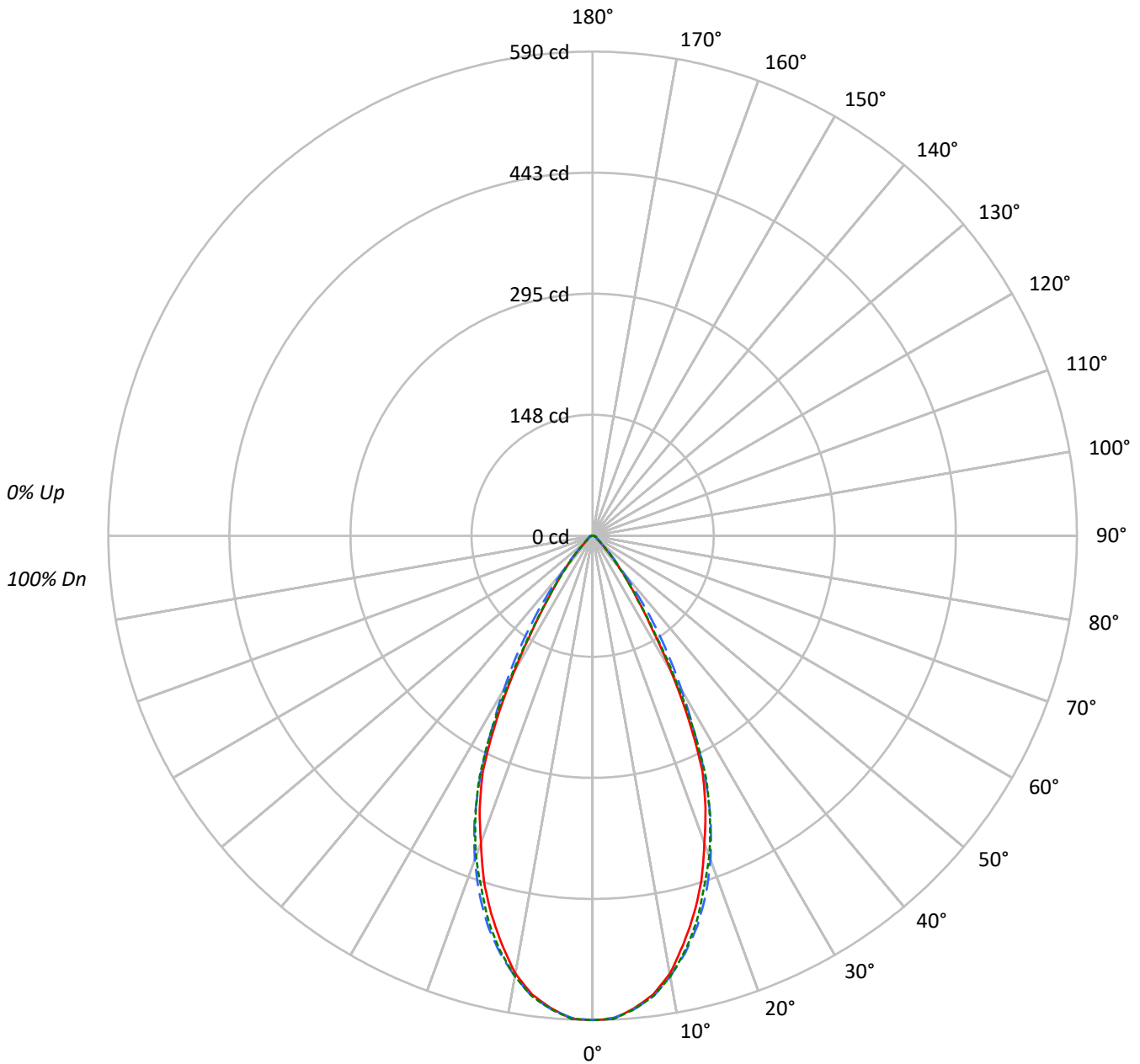
CIE Type: Direct

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					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								
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°	914820	914820	914820
5°	899487	901199	901199
10°	852754	857948	857948
15°	765439	790152	783091
20°	656333	692457	685199
25°	541295	554464	560108
30°	342211	387493	357961
35°	182978	241258	185059
40°	102384	115739	97933
45°	48225	55459	50636
50°	26525	29178	29178
55°	20808	20808	20808
60°	17050	17050	17050
65°	16138	20172	16138
70°	19941	19941	19941
75°	19763	19763	19763
80°	19638	19638	19638
85°	19563	19563	19563

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 55459 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	54.2	12.3
10°-20°	135.2	30.6
20°-30°	144.2	32.6
30°-40°	72.1	16.3
40°-50°	20.5	4.6
50°-60°	7.2	1.6
60°-70°	5.0	1.1
70°-80°	3.2	0.7
80°-90°	0.9	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°	333.6	75.4
0°-40°	405.8	91.7
0°-60°	433.5	98.0
0°-90°	442.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	442.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	590	590	590	590	590	
5°	578	579	579	579	579	54
15°	477	482	492	489	488	132
25°	316	320	324	328	328	139
35°	97	107	128	108	98	65
45°	22	23	25	24	23	19
55°	8	8	8	8	8	7
65°	4	6	6	6	4	5
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°	590.2	590.2	590.2	590.2	590.2
2.5°	589.1	588.0	588.0	589.1	589.1
5°	578.1	579.2	579.2	579.2	579.2
7.5°	563.8	564.9	566.0	567.1	566.0
10°	541.8	542.9	545.1	547.3	545.1
12.5°	510.0	515.5	520.9	519.8	518.7
15°	477.0	482.5	492.4	489.1	488.0
17.5°	440.7	447.3	458.3	457.2	450.6
20°	397.9	407.7	419.8	416.5	415.4
22.5°	359.4	367.1	375.9	377.0	373.7
25°	316.5	319.8	324.2	327.5	327.5
27.5°	253.9	263.8	267.1	270.4	266.0
30°	191.2	204.4	216.5	213.2	200.0
32.5°	136.3	152.8	170.4	158.3	141.8
35°	96.7	106.6	127.5	107.7	97.8
37.5°	70.3	73.6	87.9	74.7	70.3
40°	50.6	51.7	57.2	51.7	48.4
42.5°	34.1	36.3	38.5	36.3	34.1
45°	22.0	23.1	25.3	24.2	23.1
47.5°	14.3	15.4	16.5	16.5	16.5
50°	11.0	11.0	12.1	13.2	12.1
52.5°	8.8	8.8	9.9	9.9	8.8
55°	7.7	7.7	7.7	7.7	7.7
57.5°	6.6	6.6	6.6	6.6	6.6
60°	5.5	5.5	5.5	5.5	5.5
62.5°	5.5	5.5	5.5	5.5	5.5
65°	4.4	5.5	5.5	5.5	4.4
67.5°	4.4	4.4	4.4	4.4	4.4
70°	4.4	4.4	4.4	4.4	4.4
72.5°	3.3	3.3	3.3	3.3	3.3
75°	3.3	3.3	3.3	3.3	3.3
77.5°	2.2	2.2	2.2	2.2	2.2
80°	2.2	2.2	2.2	2.2	2.2
82.5°	1.1	1.1	1.1	1.1	1.1
85°	1.1	1.1	1.1	1.1	1.1
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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