

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: P886907

Luminaire Tested: ML412LSFL95FS1E-TIR4D40FL-TL4SDMB-1020LM-3500K

Issue Date: 7/9/2024

Test Information

Test Method: LM-79-2019
Report Number: P886907
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2402-314-53)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 7/9/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: ML412LSFL95FS1E-TIR4D40FL-TL4SDMB-1020LM-3500K
Description: 4IN SQUARE ML FLEX, SELECTABLE CCT, WITH 40D TIR, MATTE BLACK TRIM
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 3500K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1246.0 lumens
Efficiency: N/A
Efficacy: 70.8 lumens/watt
Spacing Criteria (0/90/45): 0.7 / 0.69 / 0.65
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

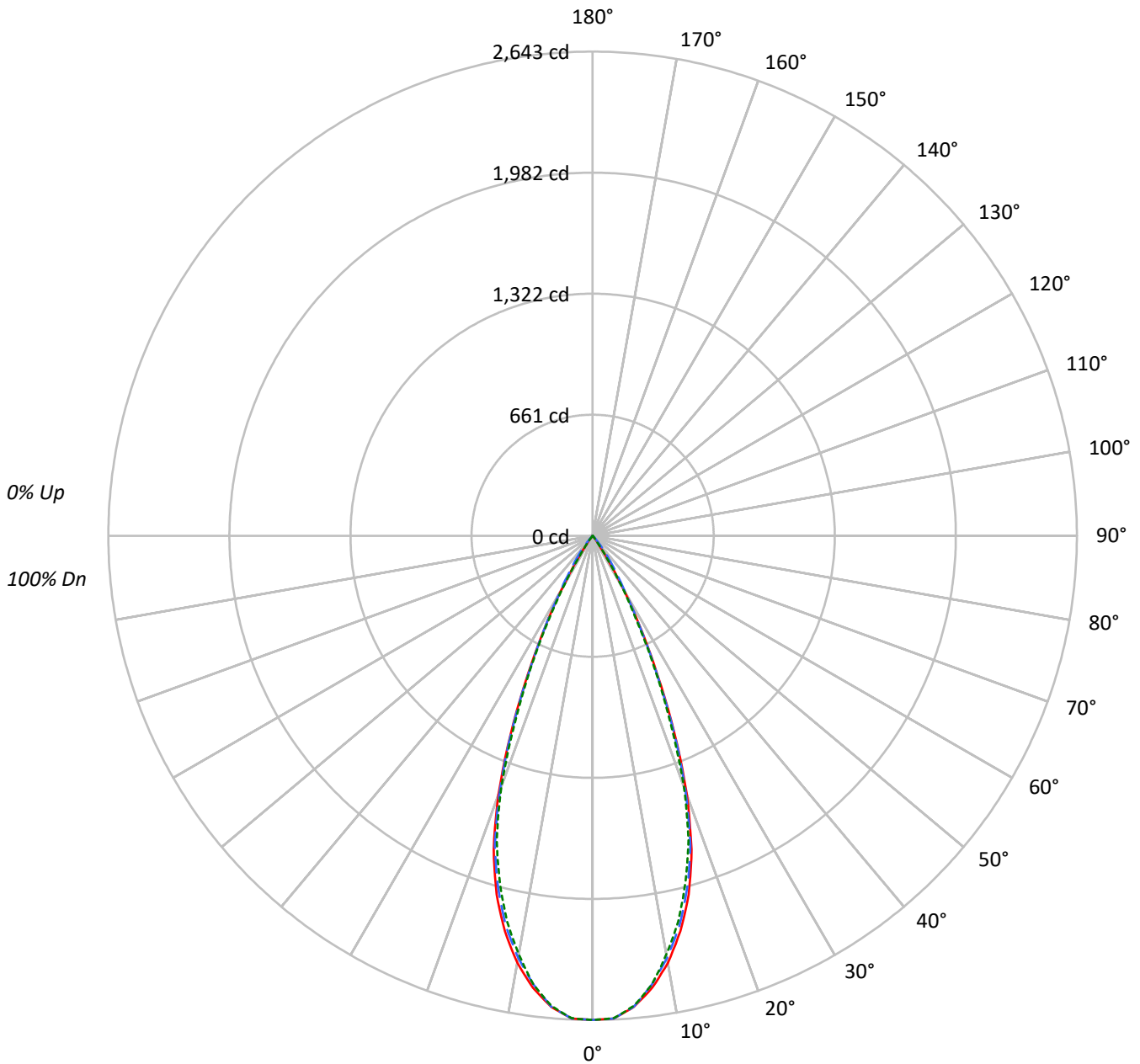
Input Watts (W): 17.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	86	84	83																			
5	98	91	87	83	97	90	86	83	89	85	82	87	84	81	86	83	81	79																			
6	94	87	82	79	93	87	82	79	85	81	78	84	80	78	83	80	77	76																			
7	91	83	79	75	90	83	78	75	82	78	75	81	77	74	80	76	74	73																			
8	88	80	75	72	87	79	75	72	79	74	71	78	74	71	77	73	71	70																			
9	85	77	72	69	84	76	72	69	76	71	68	75	71	68	74	71	68	67																			
10	82	74	69	66	81	73	69	66	73	69	66	72	68	66	71	68	65	64																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	256051	256051	256051
5°	251098	250942	250534
10°	232812	230018	228208
15°	203193	199924	196323
20°	154794	152814	150062
25°	89264	87479	85876
30°	37272	39890	34006
35°	6918	18473	6020
40°	1062	6551	1062
45°	110	1260	110
50°	0	256	0
55°	0	0	0
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: 1260 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	238.4	19.1
10°-20°	544.5	43.7
20°-30°	380.5	30.5
30°-40°	77.7	6.2
40°-50°	4.8	0.4
50°-60°	0.1	0.0
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°	1163.4	93.4
0°-40°	1241.1	99.6
0°-60°	1246.0	100.0
0°-90°	1246.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1246.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2643	2643	2643	2643	2643	
5°	2582	2585	2580	2573	2576	240
15°	2026	2023	1993	1970	1958	552
25°	835	840	818	807	803	387
35°	58	96	156	83	51	60
45°	1	2	9	2	1	2
55°	0	0	0	0	0	0
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°	2643.1	2643.1	2643.1	2643.1	2643.1
2.5°	2637.3	2635.6	2637.3	2636.4	2635.6
5°	2582.1	2584.6	2580.5	2573.0	2576.3
7.5°	2489.4	2482.8	2471.1	2467.7	2471.9
10°	2366.7	2350.0	2338.3	2334.1	2319.9
12.5°	2211.4	2203.0	2183.0	2164.6	2157.1
15°	2026.0	2022.6	1993.4	1970.0	1957.5
17.5°	1795.5	1780.4	1773.8	1751.2	1740.4
20°	1501.5	1501.5	1482.3	1450.6	1455.6
22.5°	1167.5	1154.9	1159.1	1125.7	1115.7
25°	835.1	840.1	818.4	806.7	803.4
27.5°	562.9	555.3	557.0	535.3	519.4
30°	333.2	356.6	356.6	336.5	304.0
32.5°	156.2	200.4	235.5	187.1	132.8
35°	58.5	96.0	156.2	82.7	50.9
37.5°	22.5	39.2	95.2	33.4	20.9
40°	8.4	15.9	51.8	15.0	8.4
42.5°	3.3	5.8	24.2	5.0	3.3
45°	0.8	1.7	9.2	1.7	0.8
47.5°	0.8	0.8	3.3	0.8	0.0
50°	0.0	0.0	1.7	0.0	0.0
52.5°	0.0	0.0	0.8	0.0	0.0
55°	0.0	0.0	0.0	0.0	0.0
57.5°	0.0	0.0	0.0	0.0	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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