

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: P886887

Luminaire Tested: ML412LSFL95FS1E-TIR4D25NFL-TL4SDSL-1020LM-3500K

Issue Date: 7/9/2024

Test Information

Test Method: LM-79-2019
Report Number: P886887
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2402-314-49)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 7/9/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: ML412LSFL95FS1E-TIR4D25NFL-TL4SDSL-1020LM-3500K
Description: 4IN SQUARE ML FLEX, SELECTABLE CCT, WITH 25D TIR, METALLIC SILVER TRIM
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 3500K CCT
Ballast/Driver: -

Summary

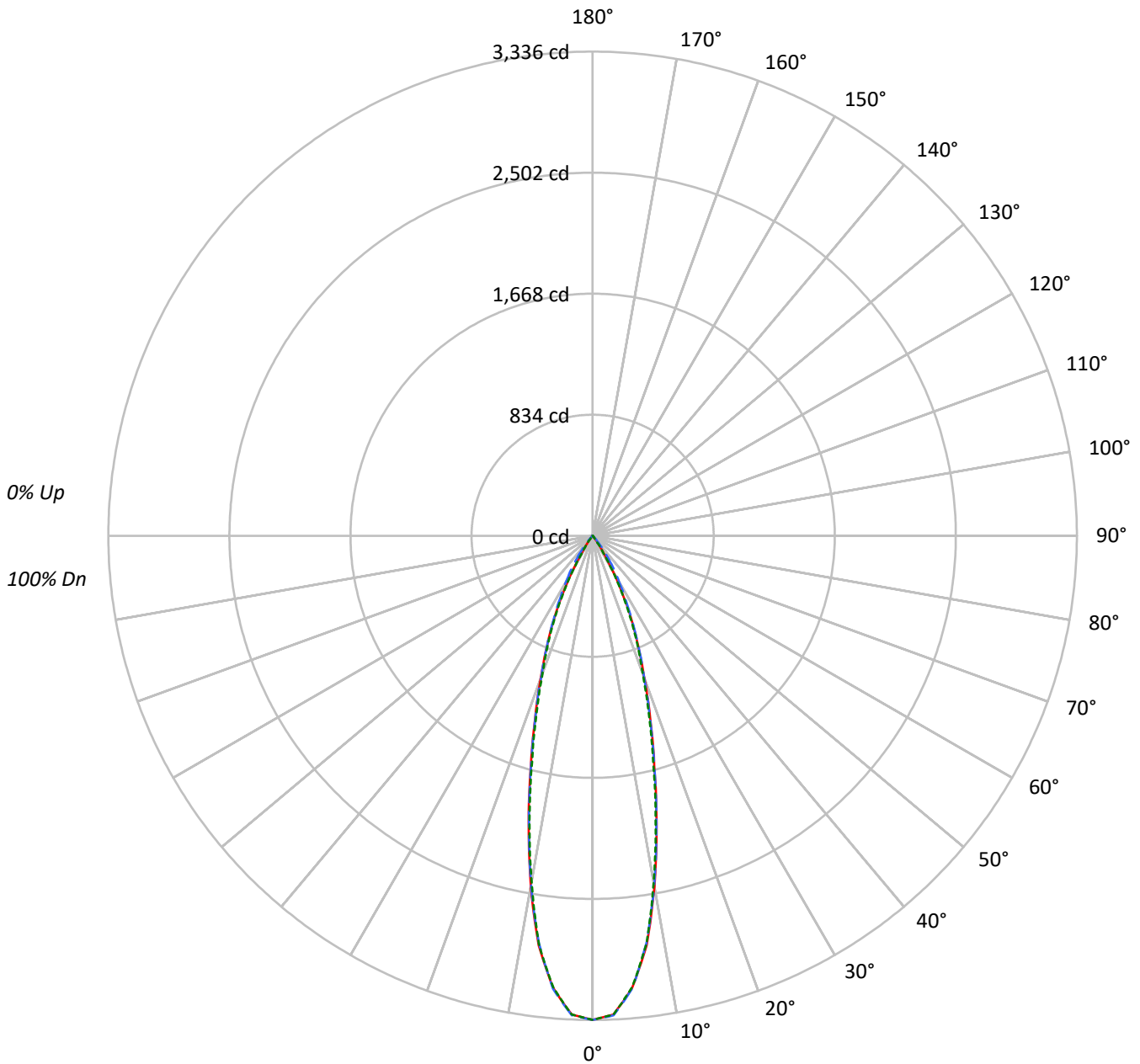
Lumens per Lamp: N/A
Luminaire Lumens: 1111.6 lumens
Efficiency: N/A
Efficacy: 63.2 lumens/watt
Spacing Criteria (0/90/45): 0.49 / 0.49 / 0.52
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

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	107	106	105	103	102	101	100	99	98	97	96																			
2	110	106	103	100	108	105	102	99	101	99	97	99	97	95	96	94	93	92																			
3	106	101	97	94	104	100	96	93	97	94	92	95	92	90	93	91	89	88																			
4	102	96	92	89	101	95	91	88	93	90	87	91	88	86	90	87	85	84																			
5	99	92	87	84	97	91	87	84	90	86	83	88	85	82	87	84	82	80																			
6	95	88	83	80	94	87	83	80	86	82	79	85	81	79	84	81	78	77																			
7	92	85	80	77	91	84	80	76	83	79	76	82	78	76	81	78	75	74																			
8	89	81	77	73	88	81	76	73	80	76	73	79	75	73	78	75	72	71																			
9	86	78	74	71	85	78	73	70	77	73	70	76	73	70	76	72	70	69																			
10	83	76	71	68	82	75	71	68	74	70	68	74	70	68	73	70	67	66																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	323128	323128	323128
5°	304077	304651	303591
10°	241183	240446	238311
15°	164711	164129	161612
20°	107371	106680	103588
25°	66988	67886	63867
30°	29308	40695	26880
35°	7794	21713	6907
40°	1796	7170	1695
45°	918	1603	795
50°	497	754	497
55°	422	422	422
60°	329	329	329
65°	390	390	390
70°	227	227	227
75°	299	299	299
80°	446	446	446
85°	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 1603 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	276.5	24.9
10°-20°	454.8	40.9
20°-30°	287.7	25.9
30°-40°	79.5	7.2
40°-50°	8.2	0.7
50°-60°	2.3	0.2
60°-70°	1.5	0.1
70°-80°	0.8	0.1
80°-90°	0.2	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°	1019.0	91.7
0°-40°	1098.5	98.8
0°-60°	1109.0	99.8
0°-90°	1111.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1111.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3336	3336	3336	3336	3336	
5°	3127	3133	3133	3115	3122	277
15°	1642	1654	1636	1616	1611	457
25°	627	636	635	617	598	282
35°	66	101	184	94	58	55
45°	7	8	12	7	6	5
55°	2	2	2	2	2	2
65°	2	2	2	2	2	1
75°	1	1	1	1	1	1
85°	0	0	0	0	0	0
90°	0	0	0	0	0	0



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3335.5	3335.5	3335.5	3335.5	3335.5
2.5°	3301.3	3306.3	3307.2	3306.3	3301.3
5°	3126.9	3132.8	3132.8	3115.2	3121.9
7.5°	2846.5	2833.2	2831.5	2824.8	2835.7
10°	2451.8	2459.3	2444.3	2445.1	2422.6
12.5°	2033.7	2039.5	2027.0	2012.0	2006.2
15°	1642.3	1654.0	1636.5	1615.6	1611.4
17.5°	1317.7	1339.4	1311.0	1291.8	1286.0
20°	1041.5	1050.6	1034.8	1013.9	1004.8
22.5°	817.0	818.7	822.0	801.1	797.0
25°	626.7	635.9	635.1	616.7	597.5
27.5°	431.4	481.5	484.9	463.2	417.3
30°	262.0	316.3	363.8	299.6	240.3
32.5°	137.7	195.3	272.1	177.8	122.7
35°	65.9	101.0	183.6	94.3	58.4
37.5°	24.2	47.6	111.0	43.4	23.4
40°	14.2	19.2	56.7	18.4	13.4
42.5°	9.2	11.7	28.4	10.8	9.2
45°	6.7	7.5	11.7	6.7	5.8
47.5°	4.2	5.0	6.7	5.0	4.2
50°	3.3	3.3	5.0	3.3	3.3
52.5°	2.5	2.5	3.3	2.5	2.5
55°	2.5	2.5	2.5	2.5	2.5
57.5°	1.7	2.5	2.5	2.5	1.7
60°	1.7	1.7	1.7	1.7	1.7
62.5°	1.7	1.7	1.7	1.7	1.7
65°	1.7	1.7	1.7	1.7	1.7
67.5°	0.8	1.7	1.7	1.7	0.8
70°	0.8	0.8	0.8	0.8	0.8
72.5°	0.8	0.8	0.8	0.8	0.8
75°	0.8	0.8	0.8	0.8	0.8
77.5°	0.8	0.8	0.8	0.8	0.8
80°	0.8	0.8	0.8	0.8	0.8
82.5°	0.0	0.0	0.8	0.8	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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