

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: P886876

Luminaire Tested: ML412LSFL95FS1E-TIR4D25NFL-TL4SDMB-1020LM-3000K

Issue Date: 7/9/2024

Test Information

Test Method: LM-79-2019
Report Number: P886876
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2402-314-50)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 7/9/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: ML412LSFL95FS1E-TIR4D25NFL-TL4SDMB-1020LM-3000K
Description: 4IN SQUARE ML FLEX, SELECTABLE CCT, WITH 25D TIR, MATTE BLACK TRIM
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1027.4 lumens
Efficiency: N/A
Efficacy: 58.4 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

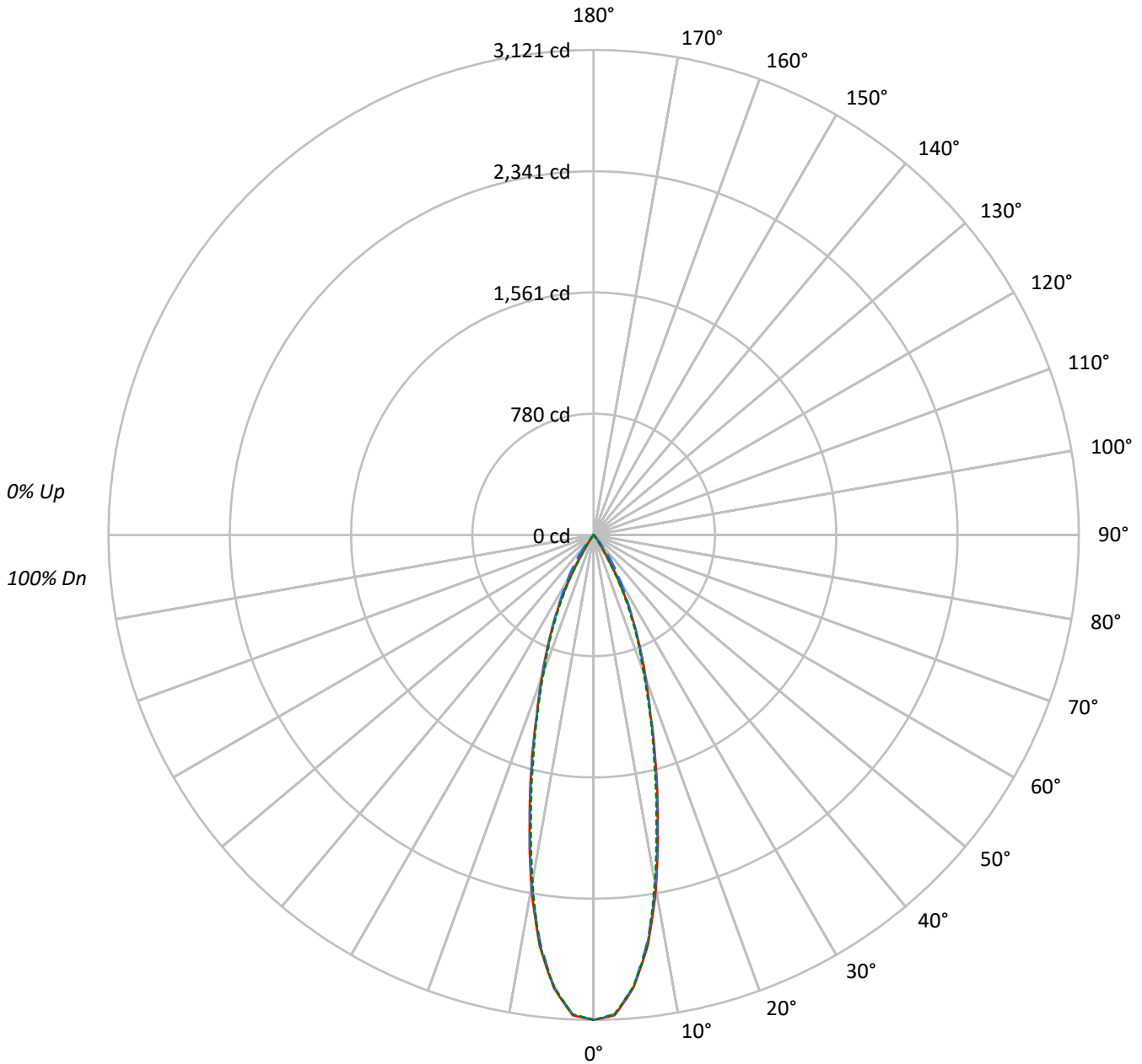
Input Watts (W): 17.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	302309	302309	302309
5°	284715	284005	283928
10°	227038	225611	223152
15°	155153	153538	151272
20°	100588	99165	96423
25°	62798	62541	59516
30°	26813	38279	24106
35°	6303	20897	5913
40°	1024	6323	1024
45°	329	1219	219
50°	0	241	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: 1219 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	258.5	25.2
10°-20°	423.5	41.2
20°-30°	267.8	26.1
30°-40°	72.3	7.0
40°-50°	5.1	0.5
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°	949.8	92.5
0°-40°	1022.1	99.5
0°-60°	1027.4	100.0
0°-90°	1027.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1027.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3121	3121	3121	3121	3121	
5°	2928	2924	2920	2923	2920	260
15°	1547	1537	1531	1503	1508	428
25°	588	592	585	579	557	264
35°	53	93	177	83	50	47
45°	2	3	9	3	2	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	0



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3120.6	3120.6	3120.6	3120.6	3120.6
2.5°	3094.8	3092.4	3086.7	3090.0	3088.4
5°	2927.8	2924.5	2920.5	2922.9	2919.7
7.5°	2664.7	2649.4	2642.1	2644.5	2659.0
10°	2308.0	2285.4	2293.5	2260.4	2268.5
12.5°	1903.7	1894.0	1890.8	1884.3	1864.1
15°	1547.0	1537.3	1530.9	1503.4	1508.3
17.5°	1217.7	1227.4	1216.9	1206.5	1198.4
20°	975.7	967.6	961.9	949.0	935.3
22.5°	767.4	765.0	759.4	744.9	740.8
25°	587.5	592.3	585.1	578.6	556.8
27.5°	407.5	447.9	452.7	430.1	384.9
30°	239.7	292.9	342.2	283.3	215.5
32.5°	125.1	175.1	254.2	164.6	108.1
35°	53.3	92.8	176.7	83.1	50.0
37.5°	16.9	40.3	100.1	36.3	17.8
40°	8.1	12.9	50.0	13.7	8.1
42.5°	4.0	6.5	24.2	6.5	4.0
45°	2.4	3.2	8.9	3.2	1.6
47.5°	0.8	1.6	3.2	1.6	0.8
50°	0.0	0.8	1.6	0.8	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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