

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: P886886

Luminaire Tested: ML412LSFL95FS1E-TIR4D25NFL-TL4SDSL-1020LM-3000K

Issue Date: 7/9/2024

Test Information

Test Method: LM-79-2019
Report Number: P886886
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-3000K
Description: 4IN SQUARE ML FLEX, SELECTABLE CCT, WITH 25D TIR, METALLIC SILVER TRIM
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: -

Summary

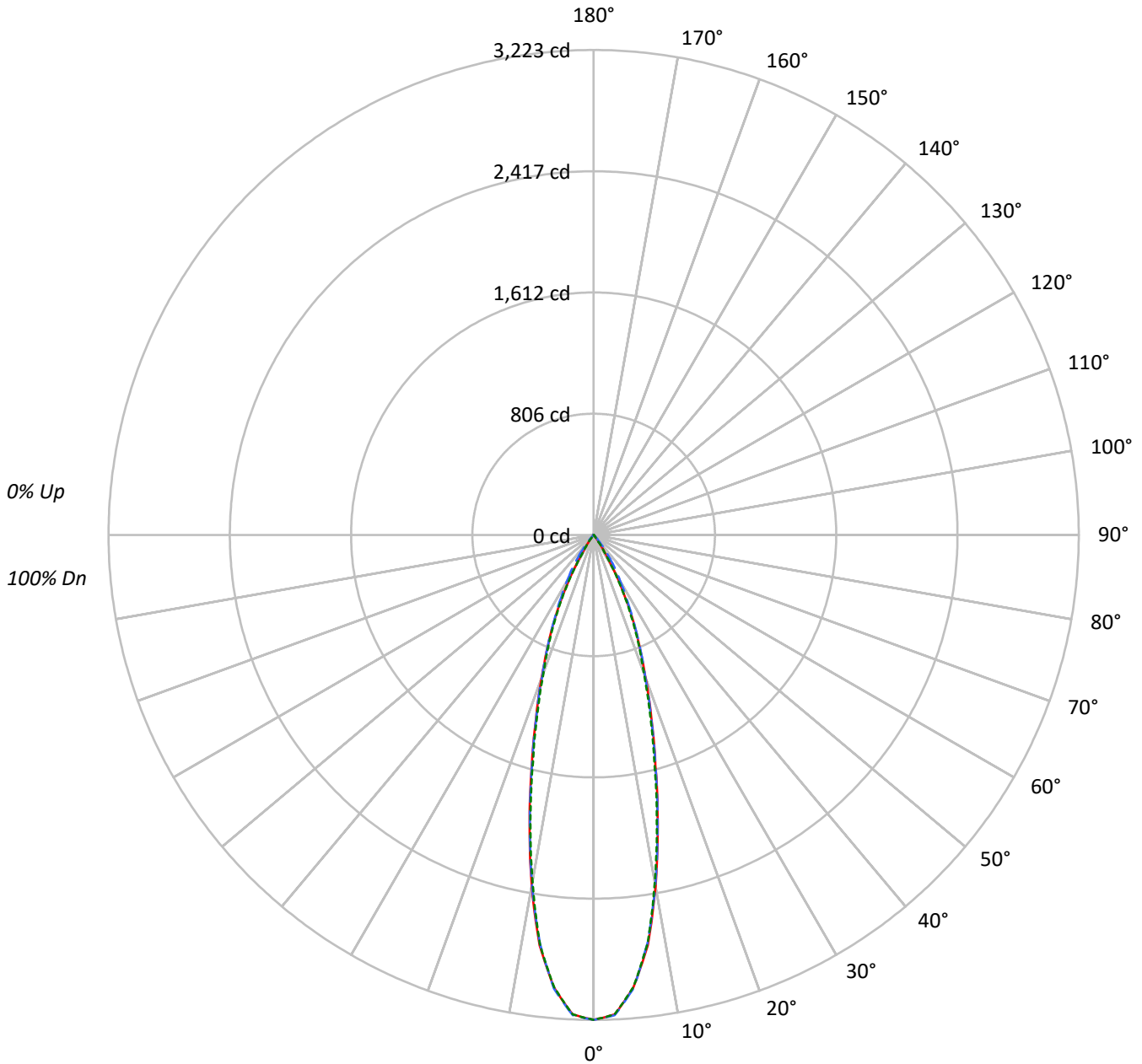
Lumens per Lamp: N/A
Luminaire Lumens: 1074.1 lumens
Efficiency: N/A
Efficacy: 61.0 lumens/watt
Spacing Criteria (0/90/45): 0.49 / 0.49 / 0.52
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

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°	312239	312239	312239
5°	293827	294372	293351
10°	233048	232340	230274
15°	159155	158593	156166
20°	103752	103082	100093
25°	64733	65599	61718
30°	28323	39331	25974
35°	7533	20980	6670
40°	1733	6930	1631
45°	891	1548	767
50°	482	723	482
55°	405	405	405
60°	310	310	310
65°	367	367	367
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: 1548 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	267.2	24.9
10°-20°	439.5	40.9
20°-30°	278.0	25.9
30°-40°	76.8	7.2
40°-50°	7.9	0.7
50°-60°	2.2	0.2
60°-70°	1.4	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°	984.7	91.7
0°-40°	1061.5	98.8
0°-60°	1071.6	99.8
0°-90°	1074.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1074.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3223	3223	3223	3223	3223	
5°	3022	3027	3027	3010	3017	268
15°	1587	1598	1581	1561	1557	442
25°	606	614	614	596	577	272
35°	64	98	177	91	56	53
45°	6	7	11	6	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	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3223.1	3223.1	3223.1	3223.1	3223.1
2.5°	3190.0	3194.9	3195.7	3194.9	3190.0
5°	3021.5	3027.1	3027.1	3010.2	3016.6
7.5°	2750.5	2737.6	2736.0	2729.6	2740.1
10°	2369.1	2376.4	2361.9	2362.7	2340.9
12.5°	1965.1	1970.8	1958.7	1944.2	1938.5
15°	1586.9	1598.2	1581.3	1561.1	1557.1
17.5°	1273.3	1294.2	1266.8	1248.3	1242.6
20°	1006.4	1015.2	999.9	979.7	970.9
22.5°	789.4	791.1	794.3	774.1	770.1
25°	605.6	614.5	613.7	595.9	577.4
27.5°	416.9	465.3	468.5	447.5	403.2
30°	253.2	305.6	351.6	289.5	232.2
32.5°	133.1	188.7	262.9	171.8	118.5
35°	63.7	97.6	177.4	91.1	56.4
37.5°	23.4	46.0	107.2	41.9	22.6
40°	13.7	18.5	54.8	17.7	12.9
42.5°	8.9	11.3	27.4	10.5	8.9
45°	6.5	7.3	11.3	6.5	5.6
47.5°	4.0	4.8	6.5	4.8	4.0
50°	3.2	3.2	4.8	3.2	3.2
52.5°	2.4	2.4	3.2	2.4	2.4
55°	2.4	2.4	2.4	2.4	2.4
57.5°	1.6	2.4	2.4	2.4	1.6
60°	1.6	1.6	1.6	1.6	1.6
62.5°	1.6	1.6	1.6	1.6	1.6
65°	1.6	1.6	1.6	1.6	1.6
67.5°	0.8	1.6	1.6	1.6	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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