

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: P886949

Luminaire Tested: ML412LSFL95FS1E-TIR4D55WFL-TL4SDSL-1020LM-5000K

Issue Date: 7/10/2024

Test Information

Test Method: LM-79-2019
Report Number: P886949
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2402-314-55)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 7/10/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: ML412LSFL95FS1E-TIR4D55WFL-TL4SDSL-1020LM-5000K
Description: 4IN SQUARE ML FLEX, SELECTABLE CCT, WITH 55D TIR, METALLIC SILVER TRIM
Light Source: (1) HCL SELECTABLE LUMEN LED 95CRI / 5000K CCT
Ballast/Driver: -

Summary

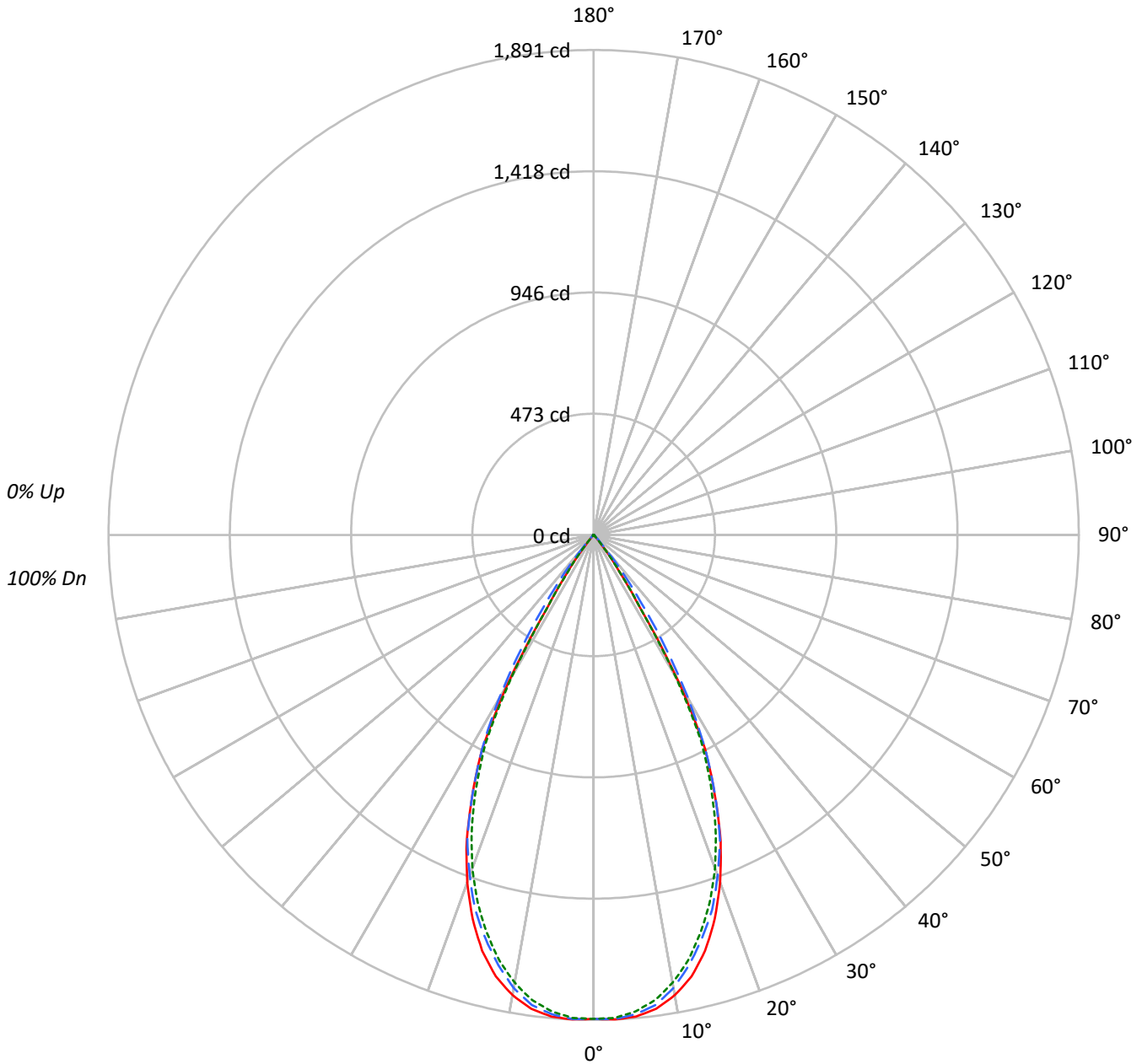
Lumens per Lamp: N/A
Luminaire Lumens: 1315.0 lumens
Efficiency: N/A
Efficacy: 74.7 lumens/watt
Spacing Criteria (0/90/45): 0.87 / 0.85 / 0.82
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

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					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					100			
1	114	112	109	107	112	109	107	105	105	104	102	102	100	99	98	97	96	95					95			
2	109	105	101	98	107	103	100	97	100	97	95	97	95	93	94	92	91	89					89			
3	104	99	94	91	102	97	93	90	95	91	88	92	89	87	90	88	86	84					84			
4	100	93	88	84	98	92	87	84	90	86	83	88	85	82	86	83	81	80					80			
5	95	88	83	79	94	87	82	79	85	81	78	84	80	77	82	79	77	75					75			
6	91	83	78	74	90	83	78	74	81	77	73	80	76	73	79	75	72	71					71			
7	87	79	74	70	86	78	73	70	77	73	69	76	72	69	75	71	69	67					67			
8	84	75	70	66	83	75	69	66	74	69	66	73	68	65	72	68	65	64					64			
9	80	71	66	63	79	71	66	62	70	65	62	69	65	62	68	65	62	61					61			
10	77	68	63	59	76	68	63	59	67	62	59	66	62	59	66	62	59	58					58			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	182775	182775	182775
5°	183298	182413	181353
10°	179230	176446	174390
15°	168372	163437	161151
20°	148536	145629	142526
25°	119503	119599	115602
30°	74981	82420	71614
35°	20601	38175	20495
40°	3579	8764	2542
45°	754	2247	630
50°	543	543	543
55°	456	456	456
60°	349	349	349
65°	206	413	206
70°	255	255	255
75°	337	337	337
80°	502	502	502
85°	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 2247 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	176.6	13.4
10°-20°	455.2	34.6
20°-30°	497.2	37.8
30°-40°	171.2	13.0
40°-50°	10.0	0.8
50°-60°	2.2	0.2
60°-70°	1.4	0.1
70°-80°	1.0	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°	1129.0	85.9
0°-40°	1300.2	98.9
0°-60°	1312.4	99.8
0°-90°	1315.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1315.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1887	1887	1887	1887	1887	
5°	1885	1883	1876	1874	1865	178
15°	1679	1659	1630	1617	1607	465
25°	1118	1124	1119	1099	1082	500
35°	174	200	323	197	173	141
45°	6	6	16	6	5	6
55°	3	3	3	3	3	2
65°	1	2	2	2	1	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°	1886.7	1886.7	1886.7	1886.7	1886.7
2.5°	1891.3	1887.7	1889.5	1888.6	1884.9
5°	1884.9	1883.1	1875.8	1874.0	1864.9
7.5°	1864.0	1861.2	1848.4	1838.4	1830.2
10°	1822.0	1810.1	1793.7	1776.4	1772.8
12.5°	1763.6	1747.2	1718.0	1699.8	1699.8
15°	1678.8	1658.8	1629.6	1616.8	1606.8
17.5°	1569.4	1558.5	1533.8	1512.0	1503.7
20°	1440.8	1439.9	1412.6	1393.4	1382.5
22.5°	1293.1	1291.3	1286.7	1262.1	1242.0
25°	1118.0	1123.5	1118.9	1098.9	1081.5
27.5°	940.2	945.7	942.0	915.6	908.3
30°	670.3	726.8	736.8	699.4	640.2
32.5°	335.6	434.1	522.5	422.2	333.8
35°	174.2	199.7	322.8	197.0	173.3
37.5°	82.1	97.6	185.1	95.8	80.2
40°	28.3	41.0	69.3	41.0	20.1
42.5°	7.3	14.6	35.6	10.9	8.2
45°	5.5	6.4	16.4	5.5	4.6
47.5°	3.6	3.6	7.3	3.6	3.6
50°	3.6	2.7	3.6	2.7	3.6
52.5°	2.7	2.7	2.7	2.7	2.7
55°	2.7	2.7	2.7	2.7	2.7
57.5°	1.8	1.8	1.8	1.8	1.8
60°	1.8	1.8	1.8	1.8	1.8
62.5°	1.8	1.8	1.8	1.8	1.8
65°	0.9	1.8	1.8	1.8	0.9
67.5°	0.9	0.9	1.8	0.9	0.9
70°	0.9	0.9	0.9	0.9	0.9
72.5°	0.9	0.9	0.9	0.9	0.9
75°	0.9	0.9	0.9	0.9	0.9
77.5°	0.9	0.9	0.9	0.9	0.9
80°	0.9	0.9	0.9	0.9	0.9
82.5°	0.0	0.0	0.0	0.9	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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