

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: P887060

Luminaire Tested: ML412LSFL9FS1E-TIR4D55WFL-TL4RDSL-1200LM-2700K

Issue Date: 7/9/2024

Test Information

Test Method: LM-79-2019
Report Number: P887060
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2402-314-43)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 7/9/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: ML412LSFL9FS1E-TIR4D55WFL-TL4RDSL-1200LM-2700K
Description: 4IN ROUND ML FLEX, SELECTABLE CCT, WITH 55D TIR, METALLIC SILVER TRIM
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1403.0 lumens
Efficiency: N/A
Efficacy: 79.7 lumens/watt
Spacing Criteria (0/90/45): 0.79 / 0.79 / 0.77
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

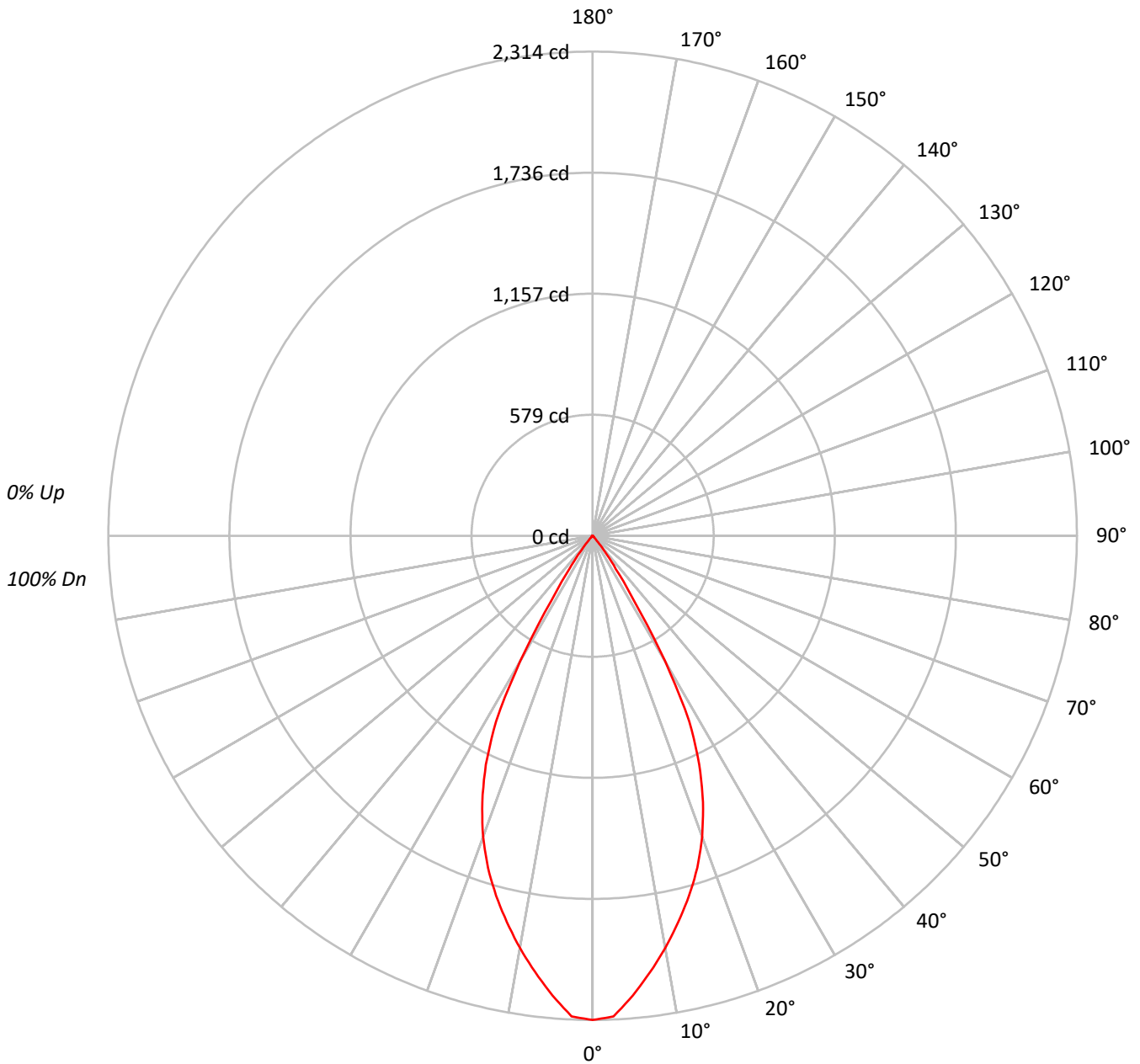
Input Watts (W): 17.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	114	112	109	107	112	109	107	106	105	104	102	102	101	99	98	97	96	95																			
2	109	105	101	98	107	103	100	97	100	97	95	97	95	93	94	93	91	90																			
3	105	99	94	91	103	98	93	90	95	92	89	93	90	87	90	88	86	85																			
4	100	93	89	85	98	92	88	84	90	86	83	88	85	82	87	84	81	80																			
5	96	88	83	80	94	88	83	79	86	82	79	84	81	78	83	80	77	76																			
6	92	84	79	75	90	83	78	75	82	77	74	80	77	74	79	76	73	72																			
7	88	80	74	71	87	79	74	71	78	73	70	77	73	70	76	72	69	68																			
8	84	76	71	67	83	75	70	67	74	70	67	73	69	66	72	69	66	65																			
9	81	72	67	64	80	72	67	64	71	66	63	70	66	63	69	66	63	62																			
10	78	69	64	60	77	69	64	60	68	63	60	67	63	60	67	63	60	59																			

AVERAGE LUMINANCE (cd/sqm):

	0°
0°	285422
5°	273016
10°	250509
15°	227454
20°	200870
25°	164201
30°	98375
35°	29046
40°	6280
45°	1570
50°	1151
55°	860
60°	740
65°	584
70°	361
75°	477
80°	710
85°	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1570 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	204.0	14.5
10°-20°	496.5	35.4
20°-30°	532.5	38.0
30°-40°	153.0	10.9
40°-50°	9.7	0.7
50°-60°	3.9	0.3
60°-70°	2.2	0.2
70°-80°	1.1	0.1
80°-90°	0.1	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°	1233.0	87.9
0°-40°	1386.0	98.8
0°-60°	1399.6	99.8
0°-90°	1403.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1403.0	100.0

CANDELA DISTRIBUTION:

	0°	Flux
0°	2314	
5°	2205	204
15°	1781	497
25°	1206	532
35°	193	153
45°	9	10
55°	4	4
65°	2	2
75°	1	1
85°	0	0
90°	0	



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CANDELA DISTRIBUTION (FULL):

0°	
0°	2314.0
2.5°	2299.0
5°	2205.0
7.5°	2103.1
10°	2000.1
12.5°	1891.2
15°	1781.2
17.5°	1663.3
20°	1530.3
22.5°	1378.4
25°	1206.5
27.5°	1000.6
30°	690.7
32.5°	367.8
35°	192.9
37.5°	96.0
40°	39.0
42.5°	13.0
45°	9.0
47.5°	7.0
50°	6.0
52.5°	5.0
55°	4.0
57.5°	4.0
60°	3.0
62.5°	3.0
65°	2.0
67.5°	2.0
70°	1.0
72.5°	1.0
75°	1.0
77.5°	1.0
80°	1.0
82.5°	0.0
85°	0.0
87.5°	0.0
90°	0.0

Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report



Report Generated By 670245859 / DESKTOP-T8S5UU9

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— 0°-180°

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(END OF REPORT)