

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: P887002

Luminaire Tested: ML412LSFL9FS1E-TIR4D25NFL-TL4RDSL-1200LM-3500K

Issue Date: 7/18/2024

Test Information

Test Method: LM-79-2019
Report Number: P887002
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2402-314-37)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 7/18/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: ML412LSFL9FS1E-TIR4D25NFL-TL4RDSL-1200LM-3500K
Description: 4IN ROUND ML FLEX, SELECTABLE CCT, WITH 25D TIR, METALLIC SILVER TRIM
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 3500K CCT
Ballast/Driver: -

Summary

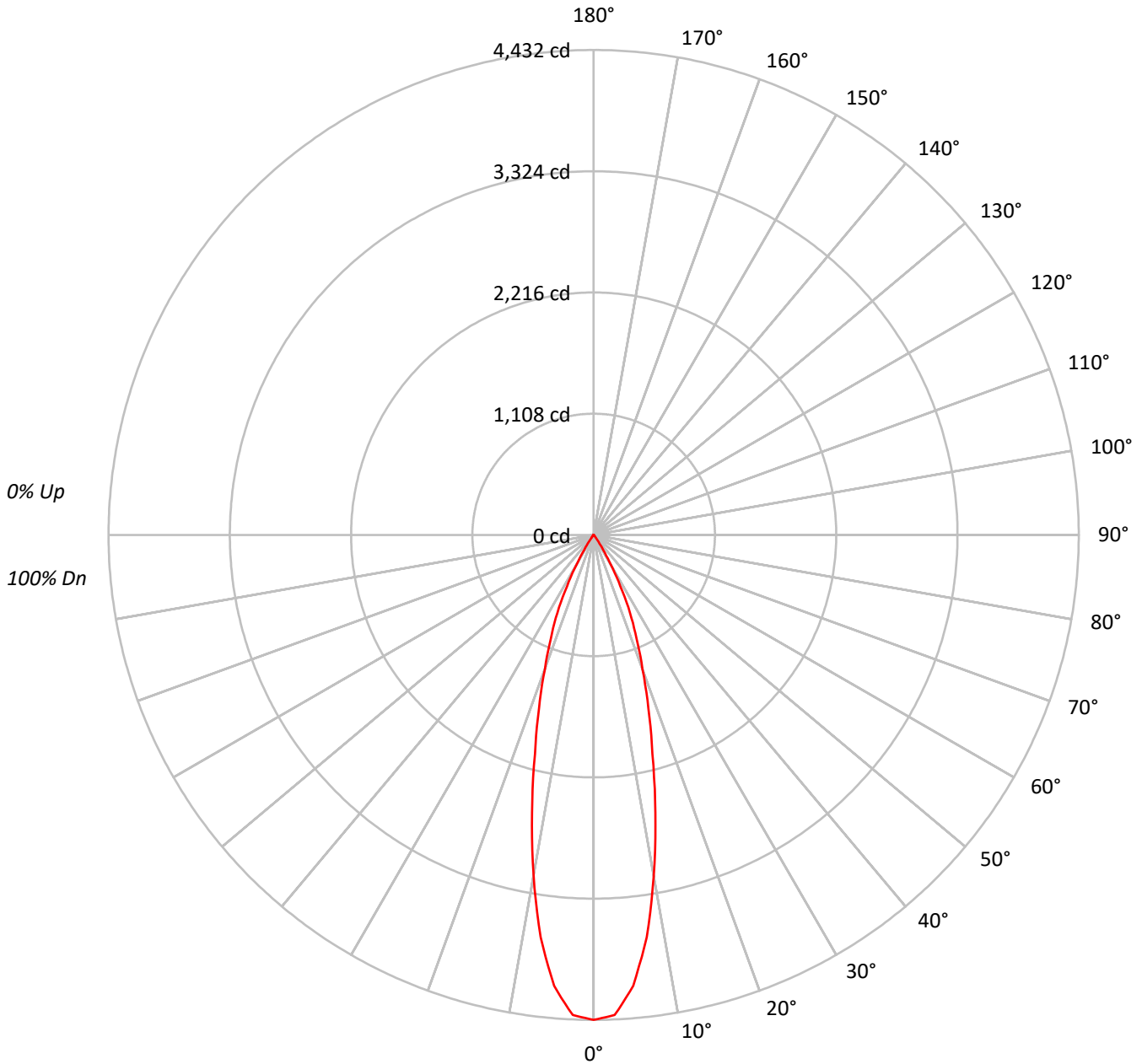
Lumens per Lamp: N/A
Luminaire Lumens: 1377.5 lumens
Efficiency: N/A
Efficacy: 78.3 lumens/watt
Spacing Criteria (0/90/45): 0.48 / 0.48 / 0.51
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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									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	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	109	112	110	108	107	106	105	104	103	101	100	99	98	98	96																												
2	110	107	103	101	108	105	102	100	102	99	97	99	97	95	96	95	93	92																												
3	107	101	98	94	105	100	97	94	98	95	92	95	93	91	93	91	89	88																												
4	103	97	93	89	101	96	92	89	94	90	88	92	89	87	90	88	86	85																												
5	99	93	88	85	98	92	88	85	90	87	84	89	86	83	87	85	82	81																												
6	96	89	84	81	95	88	84	81	87	83	80	86	82	80	84	82	79	78																												
7	93	86	81	78	92	85	81	78	84	80	77	83	79	77	82	79	76	75																												
8	90	82	78	75	89	82	78	75	81	77	74	80	77	74	79	76	74	73																												
9	87	80	75	72	86	79	75	72	78	74	72	77	74	71	77	74	71	70																												
10	84	77	72	69	83	76	72	69	76	72	69	75	71	69	74	71	69	68																												

AVERAGE LUMINANCE (cd/sqm):

	0°
0°	546655
5°	512304
10°	396048
15°	264652
20°	171152
25°	106931
30°	44039
35°	11881
40°	3607
45°	2041
50°	1228
55°	1140
60°	789
65°	613
70°	757
75°	524
80°	781
85°	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2041 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	363.2	26.4
10°-20°	580.2	42.1
20°-30°	350.2	25.4
30°-40°	66.2	4.8
40°-50°	9.4	0.7
50°-60°	4.4	0.3
60°-70°	2.5	0.2
70°-80°	1.3	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°	1293.6	93.9
0°-40°	1359.7	98.7
0°-60°	1373.6	99.7
0°-90°	1377.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1377.5	100.0

CANDELA DISTRIBUTION:

	0°	Flux
0°	4432	
5°	4138	363
15°	2072	580
25°	786	350
35°	79	66
45°	12	9
55°	5	4
65°	2	2
75°	1	1
85°	0	0
90°	0	



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CANDELA DISTRIBUTION (FULL):

0°	
0°	4431.9
2.5°	4391.4
5°	4137.6
7.5°	3708.0
10°	3162.1
12.5°	2601.3
15°	2072.5
17.5°	1661.0
20°	1303.9
22.5°	1022.4
25°	785.7
27.5°	527.7
30°	309.2
32.5°	164.2
35°	78.9
37.5°	34.1
40°	22.4
42.5°	14.9
45°	11.7
47.5°	8.5
50°	6.4
52.5°	5.3
55°	5.3
57.5°	4.3
60°	3.2
62.5°	3.2
65°	2.1
67.5°	2.1
70°	2.1
72.5°	1.1
75°	1.1
77.5°	1.1
80°	1.1
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)