

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: P887108

Luminaire Tested: ML412LSFLD2W1E-TIR4D40FL-TL4RDSL-600LM-2700K

Issue Date: 7/9/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P887108  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2402-314-40)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 7/9/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO  
Catalog Number: ML412LSFLD2W1E-TIR4D40FL-TL4RDSL-600LM-2700K  
Description: 4IN ROUND ML FLEX, SELECTABLE CCT, WITH 40D TIR, METALLIC SILVER TRIM  
Light Source: (1) D2W LED 90CRI / 2700K CCT  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 772.3 lumens  
Efficiency: N/A  
Efficacy: 82.2 lumens/watt  
Spacing Criteria (0/90/45): 0.67 / 0.67 / 0.63  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

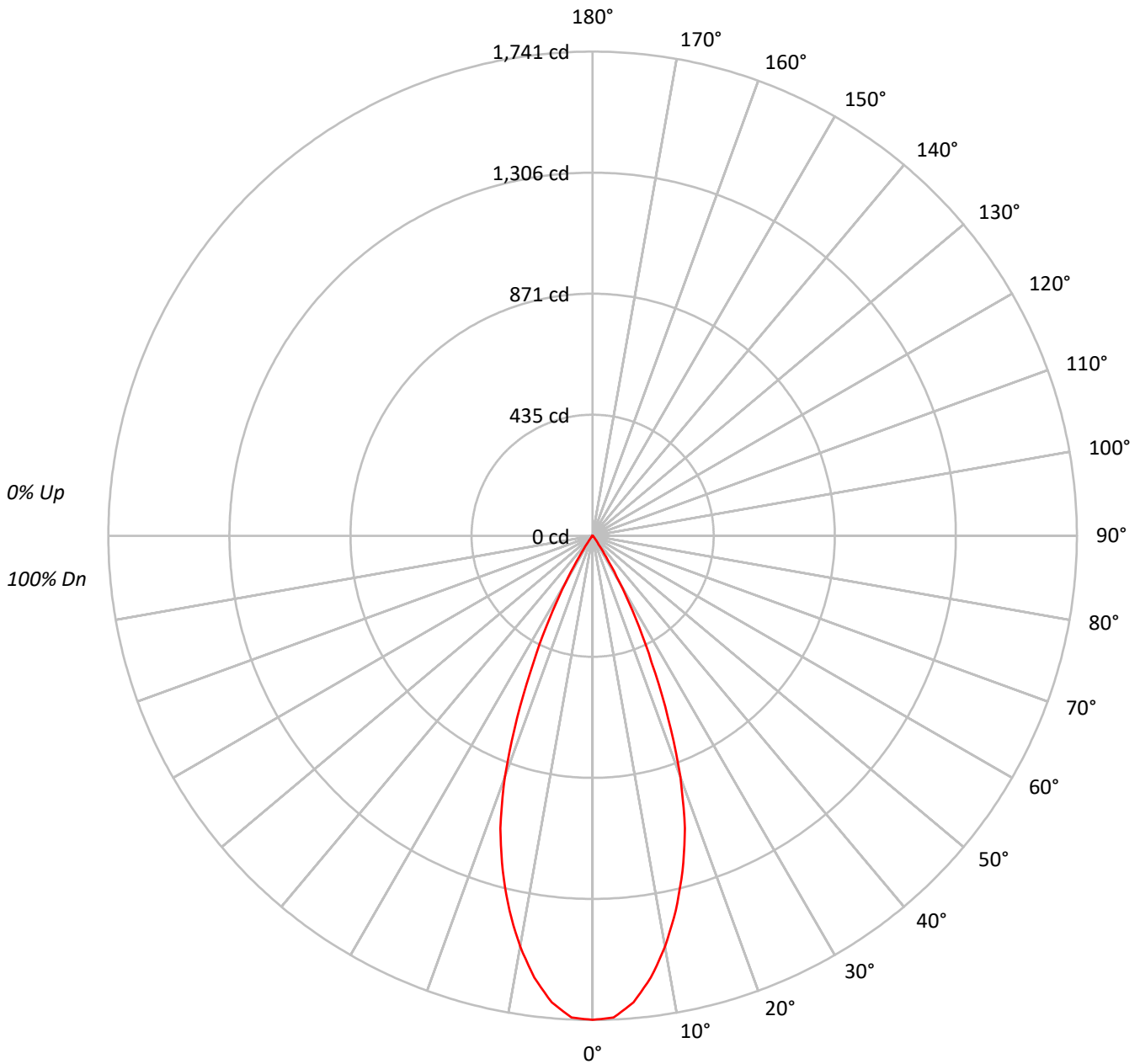
Input Watts (W): 9.4  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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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	0
RCR																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	100	100
1	115	112	110	108	112	110	108	106	106	105	103	102	101	100	99	98	97	96	96	96	96
2	110	106	103	100	108	104	101	99	101	99	97	98	96	95	96	94	93	91	91	91	91
3	106	101	97	94	104	99	96	93	97	94	91	95	92	90	92	90	89	87	87	87	87
4	102	96	92	88	100	95	91	88	93	89	87	91	88	86	89	87	85	83	83	83	83
5	98	92	87	83	97	91	86	83	89	85	82	88	84	82	86	83	81	80	80	80	80
6	95	88	83	79	93	87	82	79	85	82	79	84	81	78	83	80	78	76	76	76	76
7	91	84	79	76	90	83	79	76	82	78	75	81	77	75	80	77	74	73	73	73	73
8	88	81	76	72	87	80	75	72	79	75	72	78	74	72	77	74	71	70	70	70	70
9	85	77	73	69	84	77	72	69	76	72	69	75	72	69	75	71	69	68	68	68	68
10	82	74	70	67	81	74	70	67	73	69	66	73	69	66	72	69	66	65	65	65	65

**AVERAGE LUMINANCE (cd/sqm):**

	0°
0°	214695
5°	208507
10°	187848
15°	159391
20°	120892
25°	68348
30°	27403
35°	5345
40°	1497
45°	628
50°	403
55°	323
60°	247
65°	292
70°	180
75°	238
80°	355
85°	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 628 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	154.8	20.0
10°-20°	342.0	44.3
20°-30°	233.2	30.2
30°-40°	36.2	4.7
40°-50°	3.2	0.4
50°-60°	1.5	0.2
60°-70°	0.8	0.1
70°-80°	0.5	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°	730.0	94.5
0°-40°	766.2	99.2
0°-60°	770.9	99.8
0°-90°	772.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	772.3	100.0

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	1741	
5°	1684	155
15°	1248	342
25°	502	233
35°	36	36
45°	4	3
55°	2	1
65°	1	1
75°	0	1
85°	0	0
90°	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°
0°	1740.6
2.5°	1733.9
5°	1684.0
7.5°	1602.7
10°	1499.8
12.5°	1380.4
15°	1248.2
17.5°	1103.1
20°	921.0
22.5°	708.5
25°	502.2
27.5°	334.4
30°	192.4
32.5°	89.0
35°	35.5
37.5°	18.0
40°	9.3
42.5°	5.1
45°	3.6
47.5°	2.6
50°	2.1
52.5°	2.1
55°	1.5
57.5°	1.5
60°	1.0
62.5°	1.0
65°	1.0
67.5°	0.5
70°	0.5
72.5°	0.5
75°	0.5
77.5°	0.5
80°	0.5
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)