

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: P887096

Luminaire Tested: ML412LSFLD2W1E-TIR4D25NFL-TL4RDSL-600LM-2700K

Issue Date: 7/18/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P887096  
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: ML412LSFLD2W1E-TIR4D25NFL-TL4RDSL-600LM-2700K  
Description: 4IN ROUND ML FLEX, SELECTABLE CCT, WITH 25D TIR, METALLIC SILVER TRIM  
Light Source: (1) D2W LED 90CRI / 2700K CCT  
Ballast/Driver: -

**Summary**

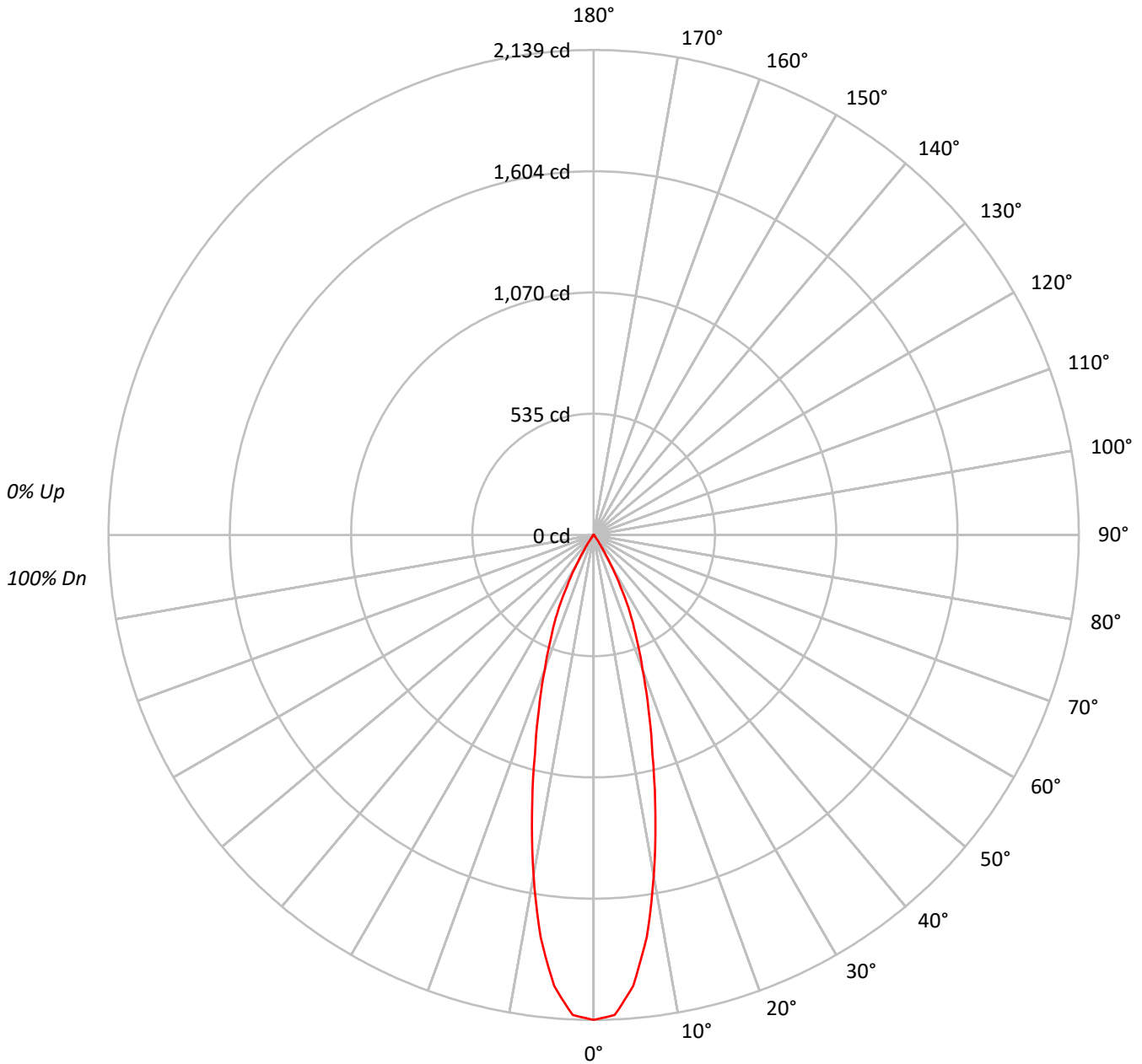
Lumens per Lamp: N/A  
Luminaire Lumens: 664.8 lumens  
Efficiency: N/A  
Efficacy: 70.7 lumens/watt  
Spacing Criteria (0/90/45): 0.48 / 0.48 / 0.51  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

Input Watts (W): 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									
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			100																
1	115	112	110	109	112	110	108	107	106	105	104	103	101	100	99	98	98	96			96																
2	110	107	103	101	108	105	102	100	102	99	97	99	97	95	96	95	93	92			92																
3	107	101	98	94	105	100	97	94	98	95	92	95	93	91	93	91	89	88			88																
4	103	97	93	89	101	96	92	89	94	90	88	92	89	87	90	88	86	85			85																
5	99	93	88	85	98	92	88	85	90	87	84	89	86	83	87	85	83	81			81																
6	96	89	84	81	95	88	84	81	87	83	80	86	82	80	84	82	79	78			78																
7	93	86	81	78	92	85	81	78	84	80	77	83	79	77	82	79	76	75			75																
8	90	82	78	75	89	82	78	75	81	77	74	80	77	74	79	76	74	73			73																
9	87	80	75	72	86	79	75	72	78	74	72	77	74	71	77	74	71	70			70																
10	84	77	72	69	83	76	72	69	76	72	69	75	71	69	74	71	69	68			68																

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

	0°
0°	263824
5°	247237
10°	191142
15°	127722
20°	82603
25°	51608
30°	21250
35°	5737
40°	1739
45°	994
50°	595
55°	559
60°	370
65°	292
70°	361
75°	238
80°	355
85°	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 994 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	175.3	26.4
10°-20°	280.0	42.1
20°-30°	169.0	25.4
30°-40°	31.9	4.8
40°-50°	4.6	0.7
50°-60°	2.1	0.3
60°-70°	1.2	0.2
70°-80°	0.6	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°	624.3	93.9
0°-40°	656.2	98.7
0°-60°	662.9	99.7
0°-90°	664.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	664.8	100.0

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	2139	
5°	1997	175
15°	1000	280
25°	379	169
35°	38	32
45°	6	5
55°	3	2
65°	1	1
75°	0	1
85°	0	0
90°	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°
0°	2138.9
2.5°	2119.3
5°	1996.8
7.5°	1789.5
10°	1526.1
12.5°	1255.4
15°	1000.2
17.5°	801.6
20°	629.3
22.5°	493.4
25°	379.2
27.5°	254.7
30°	149.2
32.5°	79.2
35°	38.1
37.5°	16.5
40°	10.8
42.5°	7.2
45°	5.7
47.5°	4.1
50°	3.1
52.5°	2.6
55°	2.6
57.5°	2.1
60°	1.5
62.5°	1.5
65°	1.0
67.5°	1.0
70°	1.0
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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Scaled Data Report



(END OF REPORT)