

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: P886874

Luminaire Tested: ML412LSFL95FS1E-TIR4D25NFL-TL4RDSL-1020LM-5000K

Issue Date: 7/18/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P886874  
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: ML412LSFL95FS1E-TIR4D25NFL-TL4RDSL-1020LM-5000K  
Description: 4IN ROUND ML FLEX, SELECTABLE CCT, WITH 25D TIR, METALLIC SILVER TRIM  
Light Source: (1) HCL SELECTABLE LUMEN LED 95CRI / 5000K CCT  
Ballast/Driver: -

**Summary**

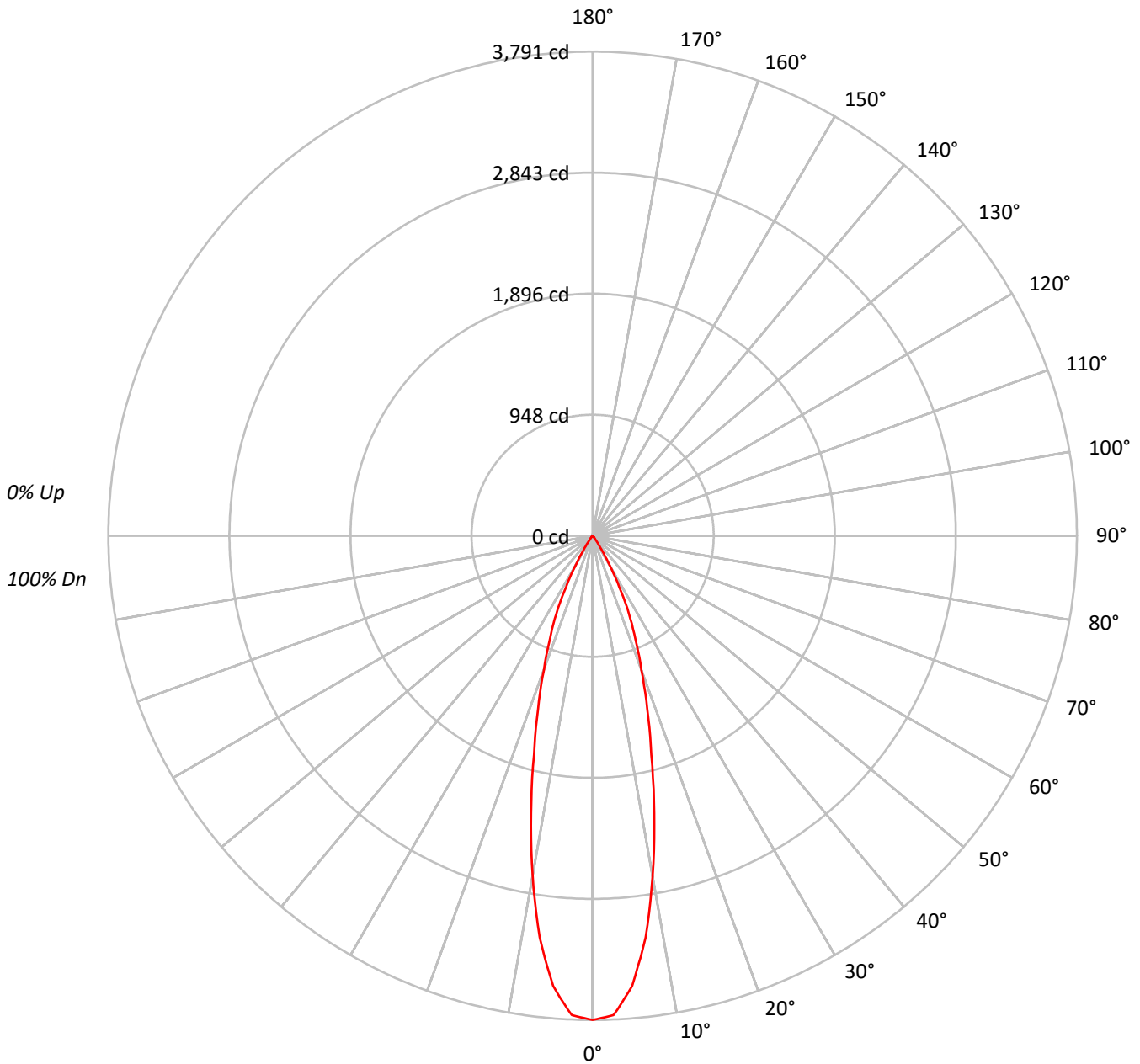
Lumens per Lamp: N/A  
Luminaire Lumens: 1178.2 lumens  
Efficiency: N/A  
Efficacy: 66.9 lumens/watt  
Spacing Criteria (0/90/45): 0.48 / 0.48 / 0.51  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 17.6  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage 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									
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	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°	467579
5°	438200
10°	338759
15°	226368
20°	146396
25°	91471
30°	37672
35°	10164
40°	3075
45°	1744
50°	1055
55°	989
60°	666
65°	525
70°	649
75°	429
80°	639
85°	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 1744 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	310.6	26.4
10°-20°	496.3	42.1
20°-30°	299.5	25.4
30°-40°	56.6	4.8
40°-50°	8.1	0.7
50°-60°	3.8	0.3
60°-70°	2.1	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°	1106.4	93.9
0°-40°	1163.0	98.7
0°-60°	1174.9	99.7
0°-90°	1178.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1178.2	100.0

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	3791	
5°	3539	311
15°	1773	496
25°	672	300
35°	68	57
45°	10	8
55°	5	4
65°	2	2
75°	1	1
85°	0	0
90°	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°
0°	3790.8
2.5°	3756.1
5°	3539.1
7.5°	3171.6
10°	2704.7
12.5°	2225.0
15°	1772.7
17.5°	1420.7
20°	1115.3
22.5°	874.5
25°	672.1
27.5°	451.4
30°	264.5
32.5°	140.4
35°	67.5
37.5°	29.2
40°	19.1
42.5°	12.8
45°	10.0
47.5°	7.3
50°	5.5
52.5°	4.6
55°	4.6
57.5°	3.6
60°	2.7
62.5°	2.7
65°	1.8
67.5°	1.8
70°	1.8
72.5°	0.9
75°	0.9
77.5°	0.9
80°	0.9
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)