

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: P886923

Luminaire Tested: ML412LSFL95FS1E-TIR4D55WFL-TL4RDMB-1020LM-4000K

Issue Date: 7/9/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P886923  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2402-314-44)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 7/9/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO  
Catalog Number: ML412LSFL95FS1E-TIR4D55WFL-TL4RDMB-1020LM-4000K  
Description: 4IN ROUND ML FLEX, SELECTABLE CCT, WITH 55D TIR, MATTE BLACK TRIM  
Light Source: (1) HCL SELECTABLE LUMEN LED 95CRI / 4000K CCT  
Ballast/Driver: -

**Summary**

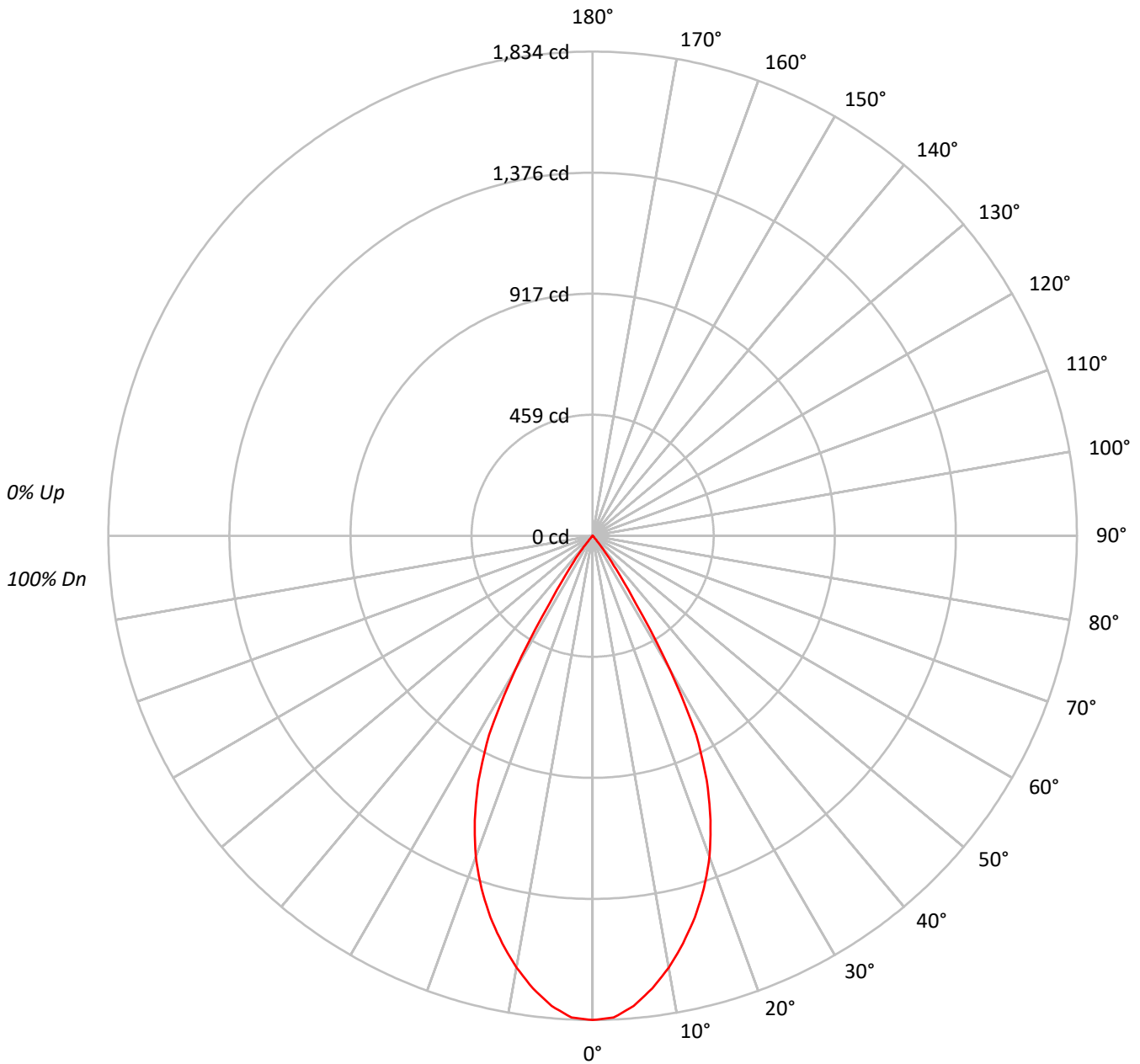
Lumens per Lamp: N/A  
Luminaire Lumens: 1162.9 lumens  
Efficiency: N/A  
Efficacy: 66.1 lumens/watt  
Spacing Criteria (0/90/45): 0.83 / 0.83 / 0.79  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

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				
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			
1	114	112	109	107	112	110	108	106	106	104	103	102	101	99	98	97	97	95			
2	109	105	102	99	107	103	100	97	100	98	95	97	95	93	95	93	91	90			
3	105	99	95	91	103	98	94	91	95	92	89	93	90	88	91	88	86	85			
4	100	94	89	85	99	93	88	85	91	87	84	89	85	83	87	84	82	80			
5	96	89	84	80	95	88	83	80	86	82	79	85	81	78	83	80	78	76			
6	92	84	79	75	91	84	79	75	82	78	75	81	77	74	80	76	74	72			
7	88	80	75	71	87	79	74	71	78	74	71	77	73	70	76	73	70	69			
8	85	76	71	67	84	76	71	67	75	70	67	74	70	67	73	69	66	65			
9	81	73	67	64	80	72	67	64	71	67	64	71	66	63	70	66	63	62			
10	78	69	64	61	77	69	64	61	68	64	61	68	63	60	67	63	60	59			

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

	0°
0°	226216
5°	221298
10°	208013
15°	191060
20°	169787
25°	139132
30°	83291
35°	23355
40°	4042
45°	157
50°	0
55°	0
60°	0
65°	0
70°	0
75°	0
80°	0
85°	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 47.5°  
 Luminance: 164 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	166.5	14.3
10°-20°	416.8	35.8
20°-30°	451.1	38.8
30°-40°	125.3	10.8
40°-50°	3.3	0.3
50°-60°	0.0	0.0
60°-70°	0.0	0.0
70°-80°	0.0	0.0
80°-90°	0.0	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°	1034.4	88.9
0°-40°	1159.7	99.7
0°-60°	1162.9	100.0
0°-90°	1162.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1162.9	100.0

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	1834	
5°	1787	166
15°	1496	417
25°	1022	451
35°	155	125
45°	1	3
55°	0	0
65°	0	0
75°	0	0
85°	0	0
90°	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°
0°	1834.0
2.5°	1826.3
5°	1787.3
7.5°	1729.2
10°	1660.8
12.5°	1581.1
15°	1496.2
17.5°	1400.9
20°	1293.5
22.5°	1166.1
25°	1022.3
27.5°	849.9
30°	584.8
32.5°	305.0
35°	155.1
37.5°	73.6
40°	25.1
42.5°	3.5
45°	0.9
47.5°	0.9
50°	0.0
52.5°	0.0
55°	0.0
57.5°	0.0
60°	0.0
62.5°	0.0
65°	0.0
67.5°	0.0
70°	0.0
72.5°	0.0
75°	0.0
77.5°	0.0
80°	0.0
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)