

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: P886899

Luminaire Tested: ML412LSFL95FS1E-TIR4D40FL-TL4RDMW-1020LM-5000K

Issue Date: 7/9/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P886899  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2402-314-39)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 7/9/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO  
Catalog Number: ML412LSFL95FS1E-TIR4D40FL-TL4RDMW-1020LM-5000K  
Description: 4IN ROUND ML FLEX, SELECTABLE CCT, WITH 40D TIR, MATTE WHITE TRIM  
Light Source: (1) HCL SELECTABLE LUMEN LED 95CRI / 5000K CCT  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1390.8 lumens  
Efficiency: N/A  
Efficacy: 79.0 lumens/watt  
Spacing Criteria (0/90/45): 0.67 / 0.67 / 0.64  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

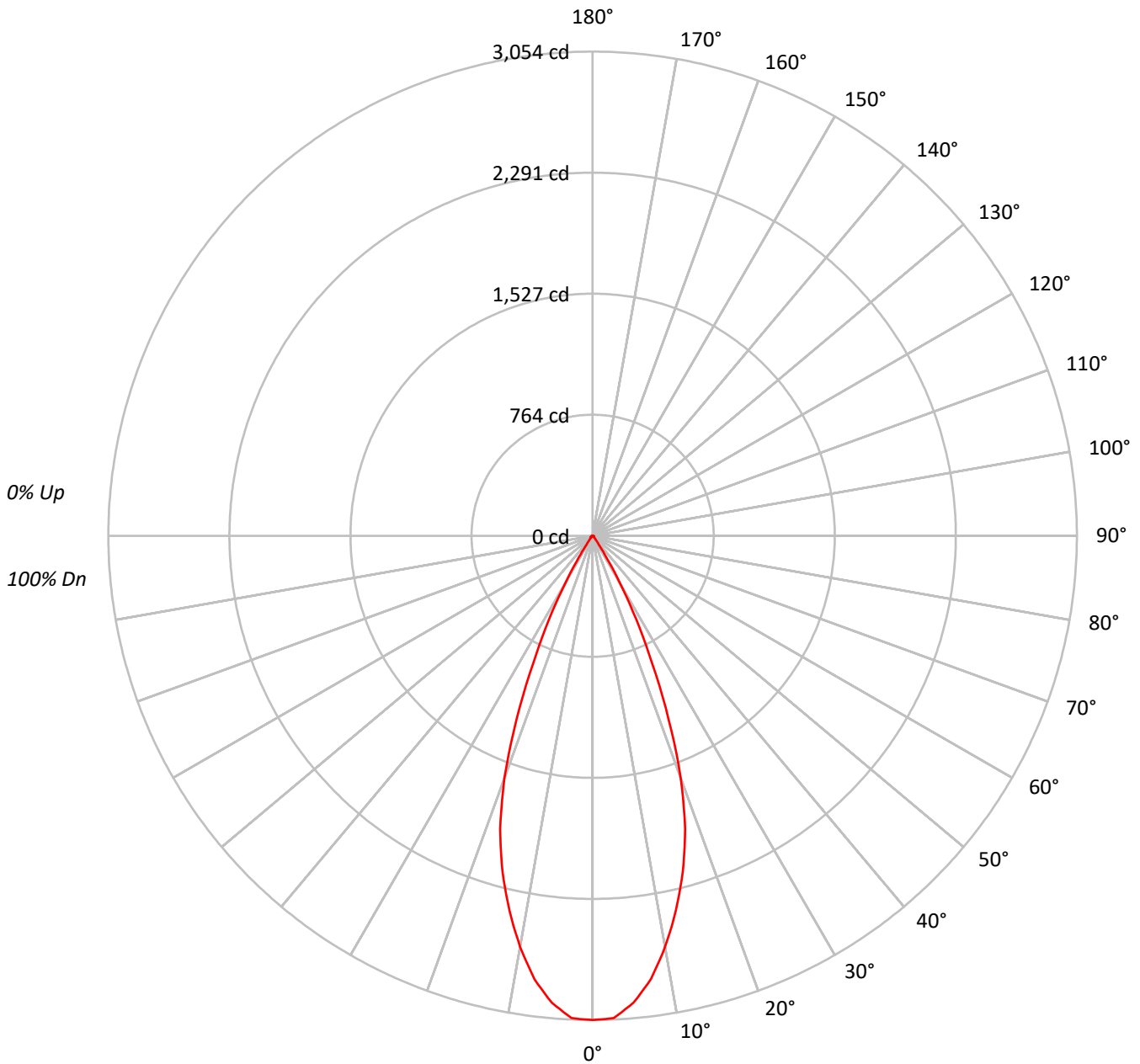
Input Watts (W): 17.6  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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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									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	100	100	99	98	97	95	95	95	92	92	90															
	1	114	112	110	108	112	110	108	106	106	104	103	102	101	100	99	98	97	95	95	95	92	92	90	90	86	86	83	82	78															
	2	110	106	102	99	108	104	101	98	101	98	96	98	96	94	95	93	92	90	90	90	88	88	86	86	82	82	80	78	75															
	3	105	100	96	92	104	99	95	92	96	93	90	94	91	89	92	89	88	86	86	86	83	83	80	80	78	78	76	75	72															
	4	101	95	90	87	100	94	90	86	92	88	85	90	87	84	88	86	83	82	82	82	80	80	78	78	76	76	73	72	69															
	5	97	91	86	82	96	90	85	82	88	84	81	86	83	80	85	82	80	78	78	78	76	76	73	73	70	70	67	66	66															
	6	94	87	82	78	93	86	81	78	84	80	77	83	80	77	82	79	76	75	75	75	73	73	70	70	67	67	64	64	64															
	7	90	83	78	74	89	82	78	74	81	77	74	80	76	73	79	76	73	72	72	72	70	70	67	67	64	64	61	61	61															
	8	87	79	74	71	86	79	74	71	78	74	71	77	73	70	76	73	70	69	69	69	67	67	64	64	61	61	58	58	58															
	9	84	76	71	68	83	76	71	68	75	71	68	74	70	68	73	70	67	66	66	66	64	64	61	61	58	58	55	55	55															
	10	81	73	69	65	80	73	68	65	72	68	65	71	68	65	71	67	65	64	64	64	62	62	59	59	56	56	53	53	53															

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

	0°
0°	376747
5°	366101
10°	329754
15°	280269
20°	213221
25°	120718
30°	48739
35°	9757
40°	3526
45°	2547
50°	2456
55°	2559
60°	2714
65°	2656
70°	2633
75°	2621
80°	2628
85°	2547

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 57.5°  
 Luminance: 2732 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	271.9	19.6
10°-20°	601.3	43.2
20°-30°	412.4	29.7
30°-40°	65.6	4.7
40°-50°	11.9	0.9
50°-60°	10.9	0.8
60°-70°	9.0	0.6
70°-80°	5.8	0.4
80°-90°	2.0	0.1
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°	1285.6	92.4
0°-40°	1351.2	97.2
0°-60°	1374.0	98.8
0°-90°	1390.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1390.8	100.0

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	3054	
5°	2957	272
15°	2195	601
25°	887	412
35°	65	66
45°	15	12
55°	12	11
65°	9	9
75°	6	6
85°	2	2
90°	0	



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**CANDELA DISTRIBUTION (FULL):**

0°	
0°	3054.4
2.5°	3045.3
5°	2956.8
7.5°	2819.0
10°	2632.8
12.5°	2422.9
15°	2194.8
17.5°	1940.1
20°	1624.4
22.5°	1252.1
25°	887.0
27.5°	593.2
30°	342.2
32.5°	157.9
35°	64.8
37.5°	35.6
40°	21.9
42.5°	16.4
45°	14.6
47.5°	13.7
50°	12.8
52.5°	12.8
55°	11.9
57.5°	11.9
60°	11.0
62.5°	10.0
65°	9.1
67.5°	8.2
70°	7.3
72.5°	6.4
75°	5.5
77.5°	4.6
80°	3.7
82.5°	2.7
85°	1.8
87.5°	0.9
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)