

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: P886865

Luminaire Tested: ML412LSFL95FS1E-TIR4D25NFL-TL4RDMW-1020LM-2700K

Issue Date: 7/18/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P886865  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2402-314-36)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 7/18/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO  
Catalog Number: ML412LSFL95FS1E-TIR4D25NFL-TL4RDMW-1020LM-2700K  
Description: 4IN ROUND ML FLEX, SELECTABLE CCT, WITH 25D TIR, MATTE WHITE TRIM  
Light Source: (1) HCL SELECTABLE LUMEN LED 95CRI / 2700K CCT  
Ballast/Driver: -

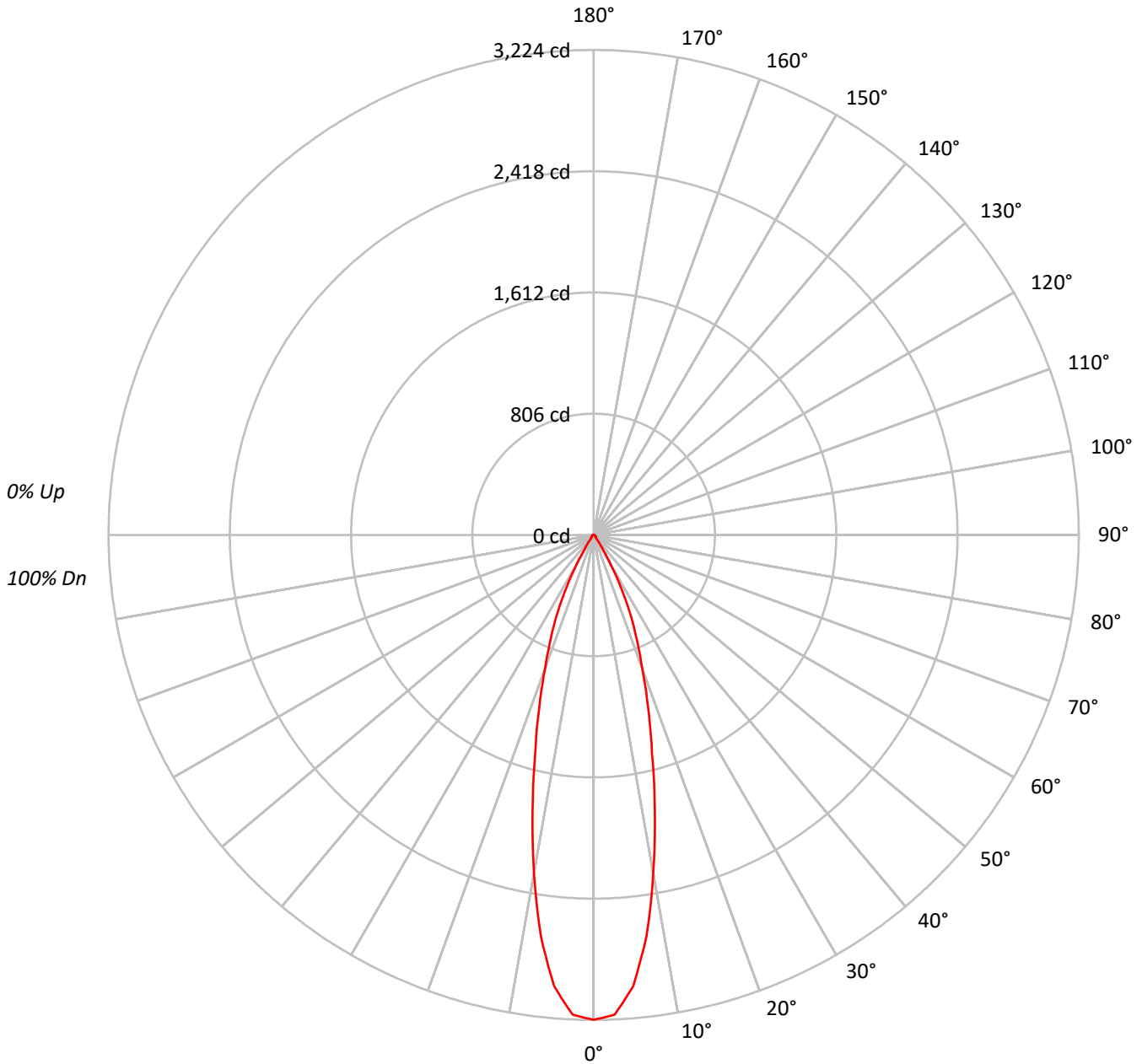
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1038.7 lumens  
Efficiency: N/A  
Efficacy: 59.0 lumens/watt  
Spacing Criteria (0/90/45): 0.47 / 0.47 / 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



TEST NUMBER: P886865  
CATALOG NUMBER: ML412LSFL95FS1E-TIR4D25NFL-TL4RDMW-1020LM-2700K

### Luminous Intensity Polar Plot





TEST NUMBER: P886865

CATALOG NUMBER: ML412LSFL95FS1E-TIR4D25NFL-TL4RDMW-1020LM-2700K

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

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

	0°
0°	397642
5°	372788
10°	285917
15°	191239
20°	123622
25°	77249
30°	32217
35°	9426
40°	3913
45°	3279
50°	3301
55°	3376
60°	3281
65°	3415
70°	3390
75°	3336
80°	3339
85°	3255

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 87.5°  
 Luminance: 4524 cd/sqm



TEST NUMBER: P886865

CATALOG NUMBER: ML412LSFL95FS1E-TIR4D25NFL-TL4RDMW-1020LM-2700K

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	263.6	25.4
10°-20°	419.1	40.3
20°-30°	253.7	24.4
30°-40°	51.5	5.0
40°-50°	15.0	1.4
50°-60°	13.9	1.3
60°-70°	11.5	1.1
70°-80°	7.6	0.7
80°-90°	2.8	0.3
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°	936.4	90.1
0°-40°	987.9	95.1
0°-60°	1016.8	97.9
0°-90°	1038.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1038.7	100.0

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	3224	
5°	3011	264
15°	1498	419
25°	568	254
35°	63	51
45°	19	15
55°	16	14
65°	12	12
75°	7	8
85°	2	3
90°	0	



TEST NUMBER: P886865  
CATALOG NUMBER: ML412LSFL95FS1E-TIR4D25NFL-TL4RDMW-1020LM-2700K

**CANDELA DISTRIBUTION (FULL):**

	0°
0°	3223.8
2.5°	3192.4
5°	3010.8
7.5°	2690.6
10°	2282.8
12.5°	1875.7
15°	1497.6
17.5°	1201.7
20°	941.8
22.5°	741.4
25°	567.6
27.5°	383.6
30°	226.2
32.5°	122.9
35°	62.6
37.5°	32.1
40°	24.3
42.5°	21.1
45°	18.8
47.5°	17.2
50°	17.2
52.5°	16.4
55°	15.7
57.5°	14.9
60°	13.3
62.5°	12.5
65°	11.7
67.5°	11.0
70°	9.4
72.5°	8.6
75°	7.0
77.5°	6.3
80°	4.7
82.5°	3.9
85°	2.3
87.5°	1.6
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

Signify Classified - Internal  
Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269

Scaled Data Report





Signify Classified - Internal  
Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269

Scaled Data Report



— 0°-180°

Signify Classified - Internal  
Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269

Scaled Data Report



Signify Classified - Internal  
Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269

Scaled Data Report



Signify Classified - Internal  
Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269

Scaled Data Report



(END OF REPORT)