

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: P887030

Luminaire Tested: ML412LSFL9FS1E-TIR4D40FL-TL4RDSL-1200LM-2700K

Issue Date: 7/9/2024

Test Information

Test Method: LM-79-2019
Report Number: P887030
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2402-314-40)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 7/9/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: ML412LSFL9FS1E-TIR4D40FL-TL4RDSL-1200LM-2700K
Description: 4IN ROUND ML FLEX, SELECTABLE CCT, WITH 40D TIR, METALLIC SILVER TRIM
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: -

Summary

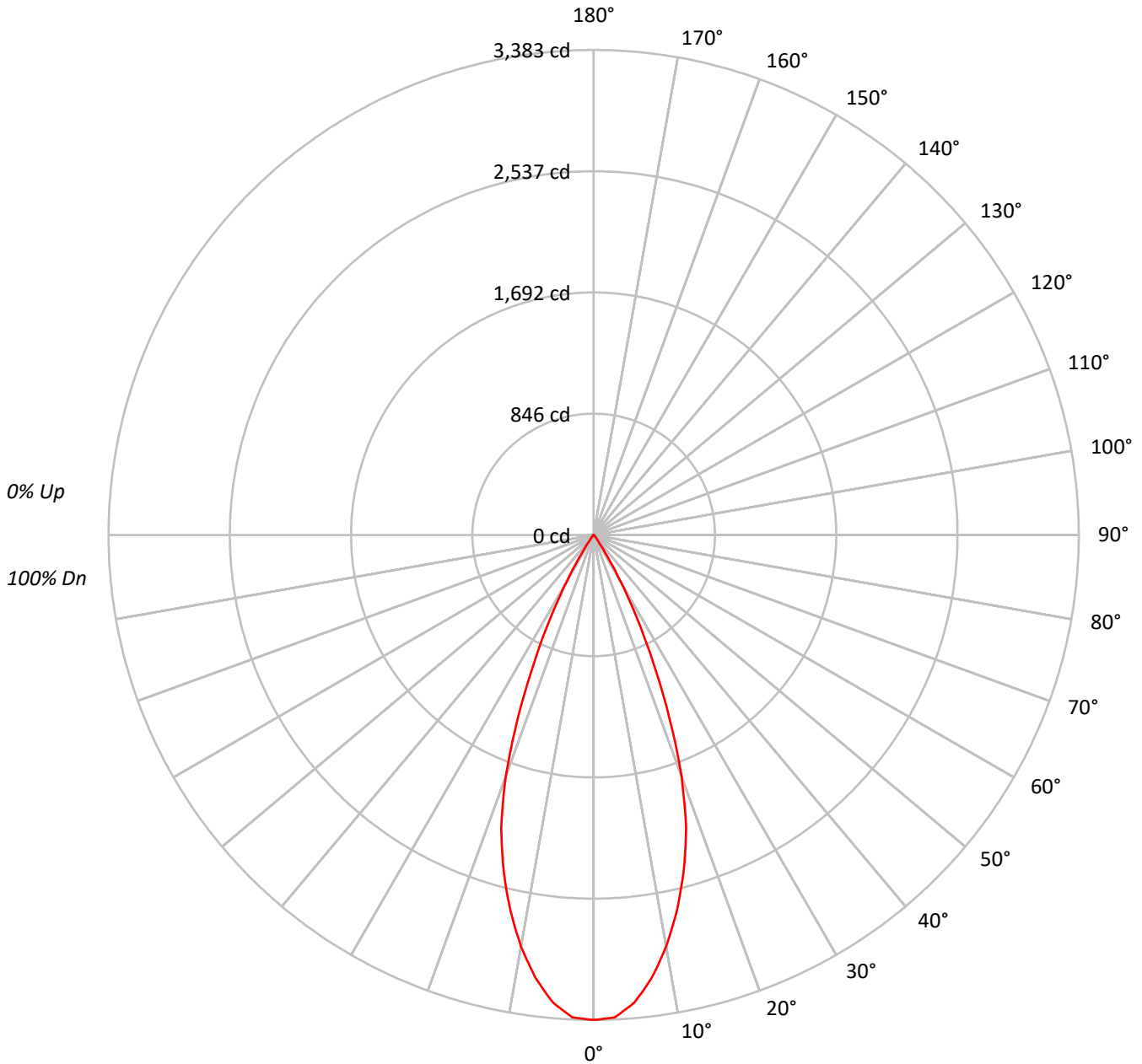
Lumens per Lamp: N/A
Luminaire Lumens: 1501.0 lumens
Efficiency: N/A
Efficacy: 85.3 lumens/watt
Spacing Criteria (0/90/45): 0.67 / 0.67 / 0.63
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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

AVERAGE LUMINANCE (cd/sqm):

	0°
0°	417254
5°	405228
10°	365074
15°	309767
20°	234945
25°	132817
30°	53268
35°	10390
40°	2898
45°	1221
50°	768
55°	645
60°	493
65°	584
70°	361
75°	477
80°	710
85°	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1221 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	300.8	20.0
10°-20°	664.7	44.3
20°-30°	453.3	30.2
30°-40°	70.3	4.7
40°-50°	6.3	0.4
50°-60°	2.9	0.2
60°-70°	1.6	0.1
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°	1418.8	94.5
0°-40°	1489.1	99.2
0°-60°	1498.2	99.8
0°-90°	1501.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1501.0	100.0

CANDELA DISTRIBUTION:

	0°	Flux
0°	3383	
5°	3273	301
15°	2426	665
25°	976	453
35°	69	70
45°	7	6
55°	3	3
65°	2	2
75°	1	1
85°	0	0
90°	0	



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CANDELA DISTRIBUTION (FULL):

0°	
0°	3382.8
2.5°	3369.8
5°	3272.8
7.5°	3114.8
10°	2914.8
12.5°	2682.8
15°	2425.8
17.5°	2143.8
20°	1789.9
22.5°	1376.9
25°	975.9
27.5°	650.0
30°	374.0
32.5°	173.0
35°	69.0
37.5°	35.0
40°	18.0
42.5°	10.0
45°	7.0
47.5°	5.0
50°	4.0
52.5°	4.0
55°	3.0
57.5°	3.0
60°	2.0
62.5°	2.0
65°	2.0
67.5°	1.0
70°	1.0
72.5°	1.0
75°	1.0
77.5°	1.0
80°	1.0
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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