

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: P887004

Luminaire Tested: ML412LSFL9FS1E-TIR4D25NFL-TL4RDSL-1200LM-5000K

Issue Date: 7/18/2024

Test Information

Test Method: LM-79-2019
Report Number: P887004
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: ML412LSFL9FS1E-TIR4D25NFL-TL4RDSL-1200LM-5000K
Description: 4IN ROUND ML FLEX, SELECTABLE CCT, WITH 25D TIR, METALLIC SILVER TRIM
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 5000K CCT
Ballast/Driver: -

Summary

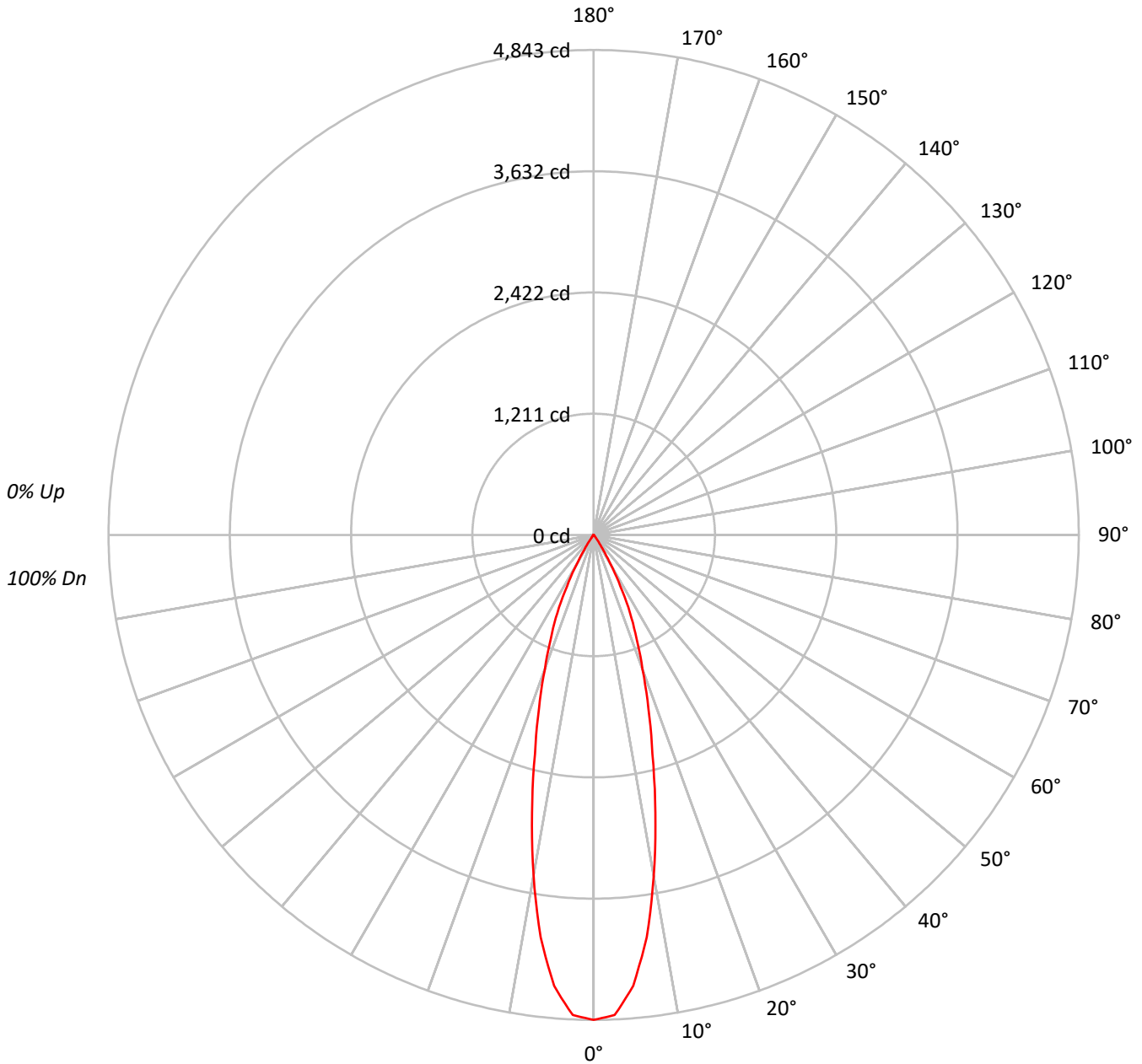
Lumens per Lamp: N/A
Luminaire Lumens: 1505.2 lumens
Efficiency: N/A
Efficacy: 85.5 lumens/watt
Spacing Criteria (0/90/45): 0.48 / 0.48 / 0.51
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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	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																		
1	115	112	110	109	112	110	108	107	106	105	104	103	101	100	99	98	98	96									96																		
2	110	107	103	101	108	105	102	100	102	99	97	99	97	95	96	95	93	92									92																		
3	107	101	98	94	105	100	97	94	98	95	92	95	93	91	93	91	89	88									88																		
4	103	97	93	89	101	96	92	89	94	90	88	92	89	87	90	88	86	85									85																		
5	99	93	88	85	98	92	88	85	90	87	84	89	86	83	87	85	82	81									81																		
6	96	89	84	81	95	88	84	81	87	83	80	86	82	80	84	82	79	78									78																		
7	93	86	81	78	92	85	81	78	84	80	77	83	79	77	82	79	76	75									75																		
8	90	82	78	75	89	82	78	75	81	77	74	80	77	74	79	76	74	73									73																		
9	87	79	75	72	86	79	75	72	78	74	72	77	74	71	77	74	71	70									70																		
10	84	77	72	69	83	76	72	69	76	72	69	75	71	69	74	71	69	68									68																		

AVERAGE LUMINANCE (cd/sqm):

	0°
0°	597338
5°	559813
10°	432771
15°	289195
20°	187022
25°	116853
30°	48112
35°	12980
40°	3945
45°	2233
50°	1343
55°	1247
60°	863
65°	671
70°	829
75°	572
80°	852
85°	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2233 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	396.8	26.4
10°-20°	634.0	42.1
20°-30°	382.7	25.4
30°-40°	72.3	4.8
40°-50°	10.3	0.7
50°-60°	4.8	0.3
60°-70°	2.7	0.2
70°-80°	1.4	0.1
80°-90°	0.2	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°	1413.5	93.9
0°-40°	1485.8	98.7
0°-60°	1500.9	99.7
0°-90°	1505.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1505.2	100.0

CANDELA DISTRIBUTION:

	0°	Flux
0°	4843	
5°	4521	397
15°	2265	634
25°	859	383
35°	86	72
45°	13	10
55°	6	5
65°	2	3
75°	1	1
85°	0	0
90°	0	



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CANDELA DISTRIBUTION (FULL):

	0°
0°	4842.8
2.5°	4798.5
5°	4521.3
7.5°	4051.8
10°	3455.3
12.5°	2842.5
15°	2264.7
17.5°	1815.0
20°	1424.8
22.5°	1117.2
25°	858.6
27.5°	576.7
30°	337.8
32.5°	179.4
35°	86.2
37.5°	37.3
40°	24.5
42.5°	16.3
45°	12.8
47.5°	9.3
50°	7.0
52.5°	5.8
55°	5.8
57.5°	4.7
60°	3.5
62.5°	3.5
65°	2.3
67.5°	2.3
70°	2.3
72.5°	1.2
75°	1.2
77.5°	1.2
80°	1.2
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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