

LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for
Cooper Lighting Solutions
(formerly Eaton)

Brand: HALO

Report Number: P601249

Luminaire Tested: **ML408LSFL95FS1E - TIR4D40FL - TL43R2G_ TL44S2G_ 2700K**

Issue Date: 7/29/2022

Tested By:

Approved By:



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Test Information

Test Method: LM-79-08
 Report Number: P601249
 Test Lab: COOPER LIGHTING SOLUTIONS
 Issue Date: 7/29/2022
 Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
 Product Line: HALO
 Catalog Number: ML408LSFL95FS1E - TIR4D40FL - TL43R2G_ TL44S2G_ 2700K
 Description: RETROFIT, 40D OPTIC, DIFFUSE CLEAR LENS TRIM
 Light Source: (1) SELECTABLE LUMEN LED 95CRI / 2700K CCT
 Ballast/Driver: -

Summary

Lumens per Lamp: N/A
 Luminaire Lumens: 942.7 lumens
 Efficiency: N/A
 Efficacy: 91.5 lumens/watt
 Spacing Criteria (0/90/45): 0.67 / 0.67 / 0.63
 Luminous Opening: Circular (Dia: 0.21' x H: 0')
 CIE Type: Direct

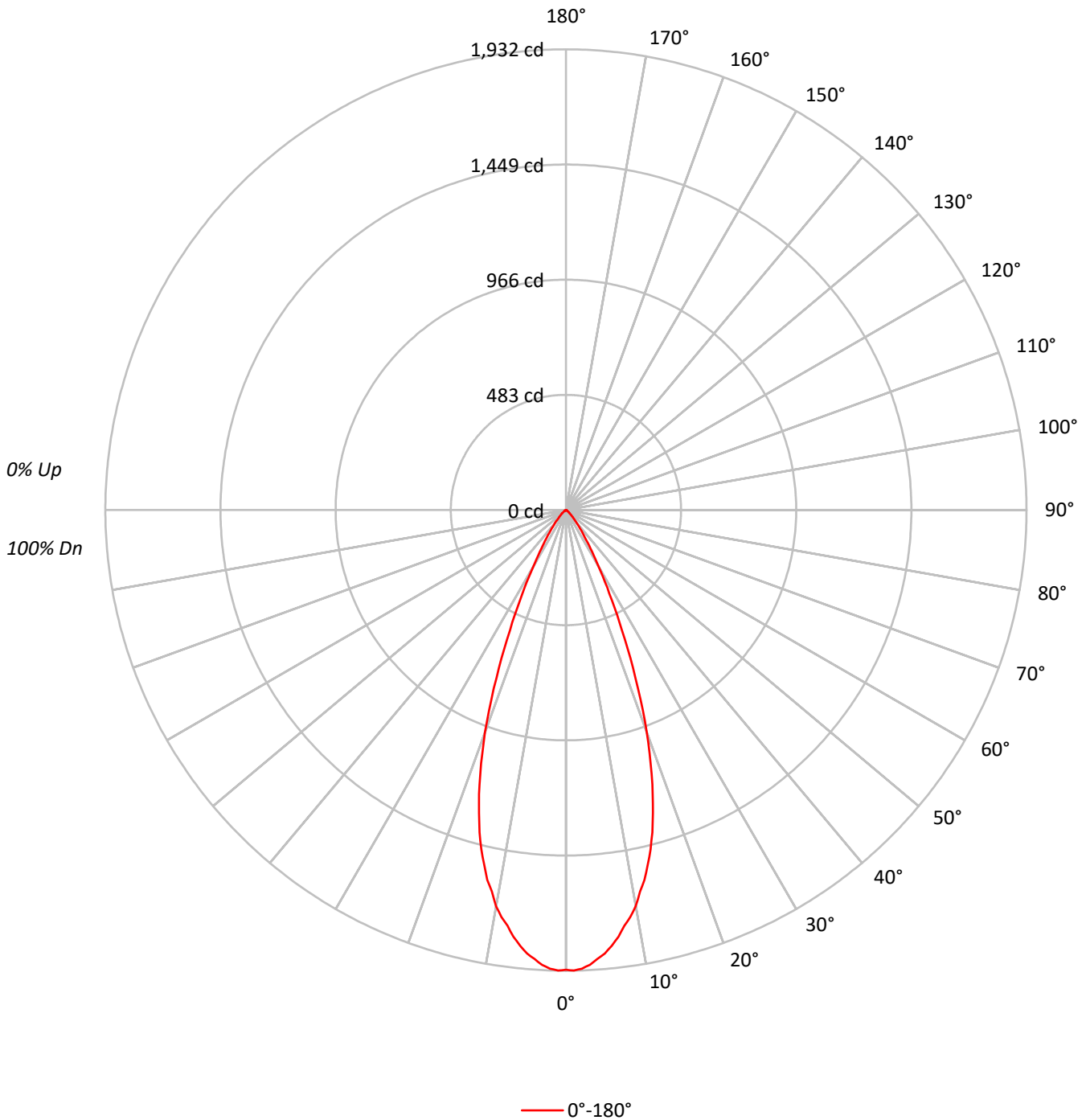
Input Watts (W): 10.3
 Input Voltage (V): NR
 Input Current (Ain): NR
 Voltage Rise (V): NR
 Power Factor: NR
 Total Harmonic Distortion (THDi): NR
 Frequency (hertz): 60
 Stabilization Time: NR
 Operation Time: NR
 Ambient Temperature (°C): NR
 Test Distance: 25 FT



Meas		Calibration Due Date	
Instrument	Identificatio		
Photometer	GONIO 1 11111111	4/22/2021	10/22/2021
Power Meter	XITRON 2801 IN0197	12/1/2020	12/1/2021
AC Power Source	CHROMA 61505 IN0196	12/1/2020	12/1/2021
DC Power Supply	AGILENT E3634A IN0198	11/30/2020	11/30/2021
Room Thermometer	ONSET IN0143	12/1/2020	12/1/2021

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

AVERAGE LUMINANCE (cd/sqm):

	0°
0°	608827
5°	591881
10°	540978
15°	457600
20°	333376
25°	193192
30°	99139
35°	51924
40°	28030
45°	14915
50°	8793
55°	4569
60°	2274
65°	1793
70°	1108
75°	0
80°	0
85°	0

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	172.2	18.3
10°-20°	379.7	40.3
20°-30°	261.1	27.7
30°-40°	90.6	9.6
40°-50°	28.1	3.0
50°-60°	8.4	0.9
60°-70°	2.1	0.2
70°-80°	0.5	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°	813.1	86.2
0°-40°	903.6	95.9
0°-60°	940.1	99.7
0°-90°	942.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	942.7	100.0

CANDELA DISTRIBUTION:

	0°	Flux
0°	1928	
5°	1867	172
15°	1400	380
25°	554	261
35°	135	91
45°	33	28
55°	8	8
65°	2	2
75°	0	0
85°	0	0
90°	0	

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CANDELA DISTRIBUTION (FULL):

0°	
0°	1928.1
1°	1931.6
2°	1924.5
3°	1910.2
4°	1887.5
5°	1867.3
6°	1837.4
7°	1802.9
8°	1761.1
9°	1727.8
10°	1687.2
11°	1630.0
12°	1585.9
13°	1526.2
14°	1466.6
15°	1399.8
17.5°	1206.7
20°	992.1
22.5°	761.9
25°	554.5
27.5°	393.5
30°	271.9
32.5°	190.8
35°	134.7
37.5°	96.6
40°	68.0
42.5°	47.7
45°	33.4
47.5°	23.8
50°	17.9
52.5°	13.1
55°	8.3
57.5°	6.0
60°	3.6
62.5°	2.4
65°	2.4
67.5°	1.2
70°	1.2
72.5°	1.2
75°	0.0
77.5°	0.0
80°	0.0
82.5°	0.0
85°	0.0
87.5°	0.0

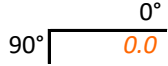
Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269


NVLAP Lab Code: 200050-0



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CANDELA DISTRIBUTION (continued):



(END OF REPORT)