

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: P601201

Luminaire Tested: **ML406NFL9FS1E - TIR4D25NFL - TL41R_ TL42S_ 2700K**

Issue Date: 7/29/2022

Tested By:

Approved By:



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Test Information

Test Method: LM-79-08
 Report Number: P601201
 Test Lab: COOPER LIGHTING SOLUTIONS
 Issue Date: 7/29/2022
 Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
 Product Line: HALO
 Catalog Number: ML406NFL9FS1E - TIR4D25NFL - TL41R_ TL42S_ 2700K
 Description: RETROFIT, 25D OPTIC, OPEN TRIM
 Light Source: (1) SELECTABLE LUMEN LED 90CRI / 2700K CCT
 Ballast/Driver: -

Summary

Lumens per Lamp: N/A
 Luminaire Lumens: 840.0 lumens
 Efficiency: N/A
 Efficacy: 101.2 lumens/watt
 Spacing Criteria (0/90/45): 0.43 / 0.43 / 0.46
 Luminous Opening: Circular (Dia: 0.21' x H: 0')
 CIE Type: Direct

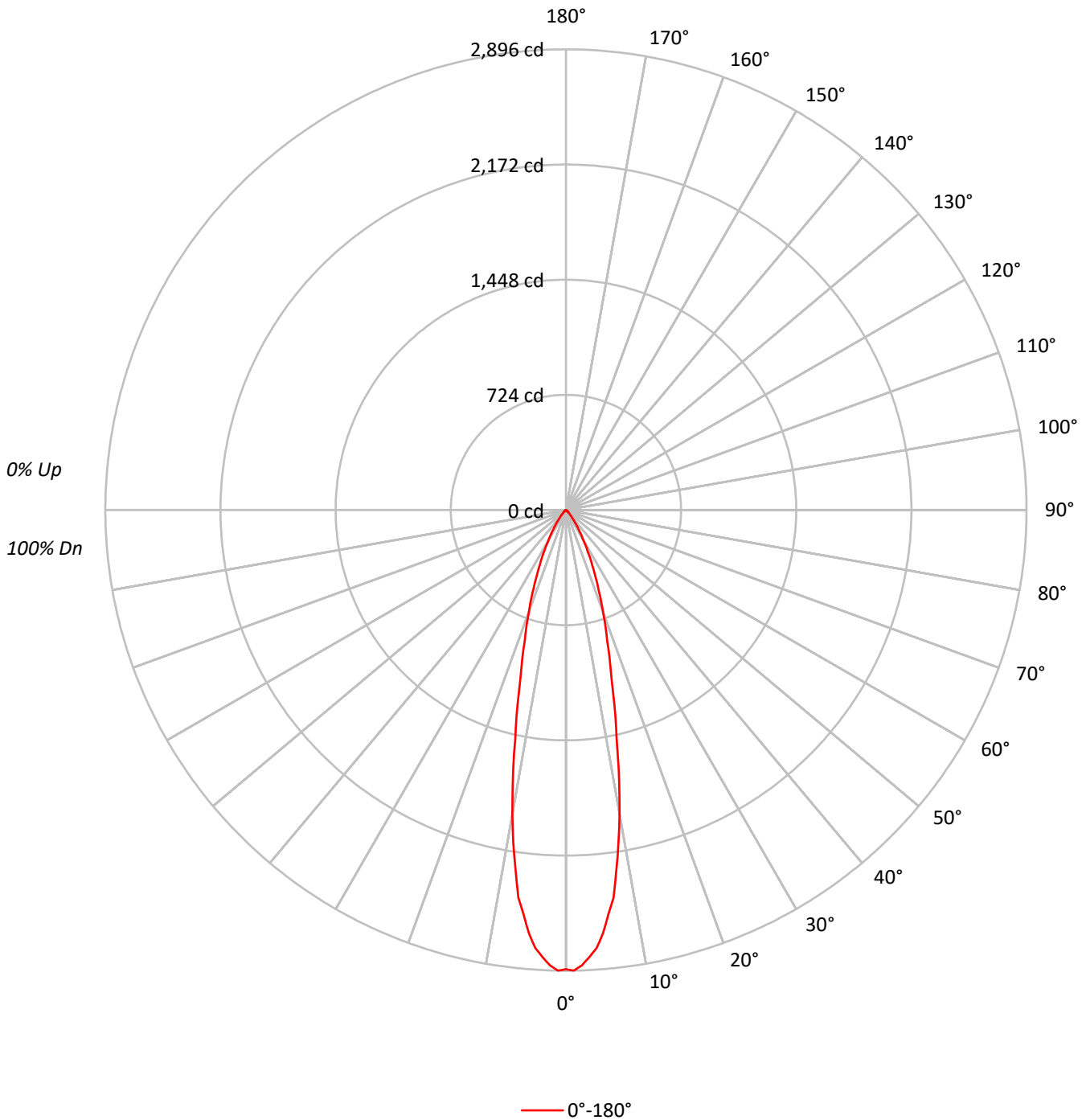
Input Watts (W): 8.3
 Input Voltage (V): NR
 Input Current (Ain): NR
 Voltage Rise (V): NR
 Power Factor: NR
 Total Harmonic Distortion (THDi): NR
 Frequency (hertz): 60
 Stabilization Time: NR
 Operation Time: NR
 Ambient Temperature (°C): NR
 Test Distance: 25 FT



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	115	112	110	108	112	110	108	107	106	105	103	102	101	100	99	98	97	96
2	110	106	103	100	108	105	102	99	101	99	97	98	97	95	96	94	93	91
3	106	101	97	94	104	100	96	93	97	94	91	95	92	90	93	90	89	87
4	102	96	92	88	101	95	91	88	93	90	87	91	88	86	89	87	85	84
5	98	92	87	84	97	91	87	83	89	86	83	88	84	82	86	84	81	80
6	95	88	83	80	94	87	83	80	86	82	79	85	81	78	83	80	78	77
7	92	84	80	76	91	84	79	76	83	79	76	82	78	75	81	77	75	74
8	89	81	76	73	88	81	76	73	80	76	73	79	75	72	78	75	72	71
9	86	78	74	70	85	78	73	70	77	73	70	76	72	70	75	72	70	69
10	83	75	71	68	82	75	71	68	74	70	68	74	70	67	73	70	67	66

AVERAGE LUMINANCE (cd/sqm):

	0°
0°	911298
5°	846662
10°	622451
15°	363060
20°	229105
25°	141071
30°	80543
35°	43559
40°	20610
45°	10271
50°	5895
55°	2753
60°	1263
65°	747
70°	923
75°	0
80°	0
85°	0

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	231.4	27.5
10°-20°	319.2	38.0
20°-30°	189.1	22.5
30°-40°	74.0	8.8
40°-50°	19.8	2.4
50°-60°	5.1	0.6
60°-70°	1.4	0.2
70°-80°	0.1	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°	739.7	88.1
0°-40°	813.7	96.9
0°-60°	838.5	99.8
0°-90°	840.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	840.0	100.0

CANDELA DISTRIBUTION:

	0°	Flux
0°	2886	
5°	2671	231
15°	1111	319
25°	405	189
35°	113	74
45°	23	20
55°	5	5
65°	1	1
75°	0	0
85°	0	0
90°	0	

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CANDELA DISTRIBUTION (FULL):

	0°
0°	2886.0
1°	2896.0
2°	2864.0
3°	2814.0
4°	2761.0
5°	2671.1
6°	2554.1
7°	2455.1
8°	2281.2
9°	2113.3
10°	1941.3
12.5°	1474.5
15°	1110.6
17.5°	861.7
20°	681.8
22.5°	528.8
25°	404.9
27.5°	302.9
30°	220.9
32.5°	160.9
35°	113.0
37.5°	75.0
40°	50.0
42.5°	33.0
45°	23.0
47.5°	17.0
50°	12.0
52.5°	8.0
55°	5.0
57.5°	3.0
60°	2.0
62.5°	2.0
65°	1.0
67.5°	1.0
70°	1.0
72.5°	0.0
75°	0.0
77.5°	0.0
80°	0.0
82.5°	0.0
85°	0.0
87.5°	0.0
90°	0.0

(END OF REPORT)