

Scaled data based on original data using

LM-41-14 Approved Method for Photometric Testing Of Indoor Fluorescent Luminaires

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: HALO

Report Number: P392725

Luminaire Tested: **ML4D09_930 - TIR45SP15 - TL41RMW - TL42SMW**

Issue Date: 3/19/2020

Test Information

Test Method: LM-41-14
Report Number: P392725
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1809-960-1)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/19/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO
Catalog Number: ML4D09_930 - TIR45SP15 - TL41RMW - TL42SMW
Description: ML4 900LM, 15° SP OPTIC, WITH ROUND PINHOLE MATTE WHITE FLANGE
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1129.5 lumens
Efficiency: N/A
Efficacy: 100.0 lumens/watt
Spacing Criteria (0/90/45): 0.29 / 0.29 / 0.28
Luminous Opening: Circular (Dia: 0.17' x H: 0')
CIE Type: Direct

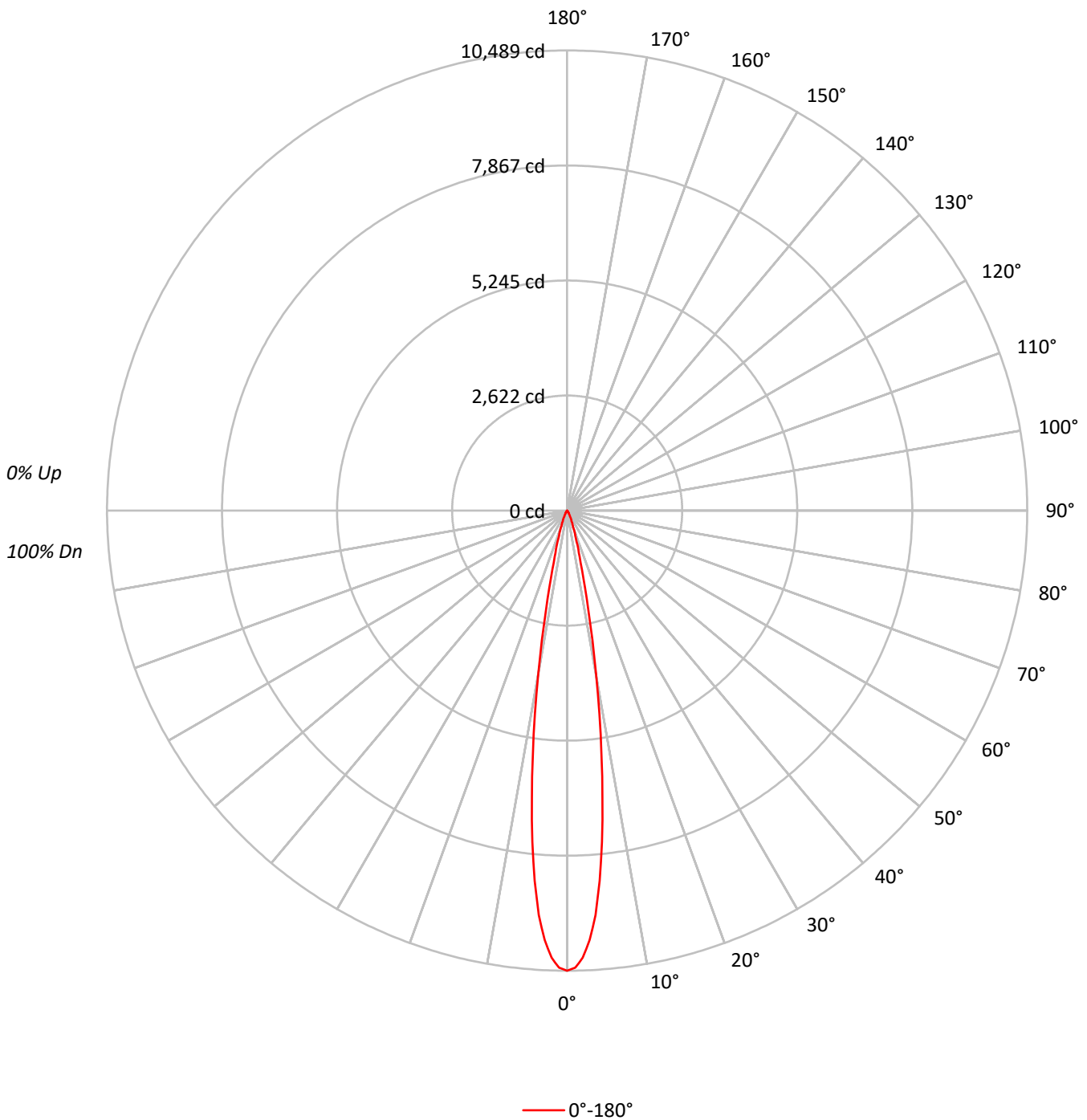
Input Watts (W): 11.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	116	114	112	111	113	112	110	109	108	107	106	104	103	102	101	100	100	98
2	113	109	107	105	111	108	106	104	105	103	101	102	101	99	99	98	97	96
3	110	106	103	100	108	105	102	100	102	100	98	100	98	97	98	96	95	94
4	107	103	99	97	106	102	99	96	100	97	95	98	96	94	96	95	93	92
5	105	100	97	94	104	99	96	94	98	95	93	96	94	92	95	93	91	90
6	103	98	94	92	102	97	94	91	96	93	91	95	92	90	93	91	90	89
7	101	95	92	90	100	95	92	89	94	91	89	93	90	89	92	90	88	87
8	99	93	90	88	98	93	90	88	92	89	87	91	89	87	91	88	87	86
9	97	92	88	86	96	91	88	86	91	88	86	90	87	86	89	87	85	85
10	95	90	87	85	95	90	87	85	89	86	84	88	86	84	88	86	84	83

AVERAGE LUMINANCE (cd/sqm):

	0°
0°	5175107
5°	4196522
10°	1896200
15°	555784
20°	216055
25°	99241
30°	40449
35°	20719
40°	10369
45°	3070
50°	1689
55°	602
60°	0
65°	0
70°	0
75°	0
80°	0
85°	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	647.6	57.3
10°-20°	363.7	32.2
20°-30°	89.7	7.9
30°-40°	23.1	2.0
40°-50°	4.6	0.4
50°-60°	0.9	0.1
60°-70°	0.0	0.0
70°-80°	0.0	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°	1100.9	97.5
0°-40°	1124.0	99.5
0°-60°	1129.5	100.0
0°-90°	1129.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1129.5	100.0

CANDELA DISTRIBUTION:

	0°	Flux
0°	10489	
5°	8473	648
15°	1088	364
25°	182	90
35°	34	23
45°	4	5
55°	1	1
65°	0	0
75°	0	0
85°	0	0
90°	0	



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CANDELA DISTRIBUTION (FULL):

0°	
0°	10489.1
1°	10420.3
2°	10197.7
3°	9797.9
4°	9242.8
5°	8473.3
6°	7598.3
7°	6594.4
8°	5628.6
9°	4681.8
10°	3784.9
11°	3009.4
12°	2325.5
13°	1802.7
14°	1384.6
15°	1088.1
17.5°	653.9
20°	411.5
22.5°	271.7
25°	182.3
27.5°	117.9
30°	71.0
32.5°	49.1
35°	34.4
37.5°	24.2
40°	16.1
42.5°	8.1
45°	4.4
47.5°	2.9
50°	2.2
52.5°	1.5
55°	0.7
57.5°	0.7
60°	0.0
62.5°	0.0
65°	0.0
67.5°	0.0
70°	0.0
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



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CANDELA DISTRIBUTION (continued):

90° | $\frac{0^\circ}{0.0}$

(END OF REPORT)