

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: P277719

Luminaire Tested: **ML4D09_D2WE - TIR45SP15 - TL41RMW - TL42SMW**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P277719
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-893-4)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO
Catalog Number: ML4D09_D2WE - TIR45SP15 - TL41RMW - TL42SMW
Description: ML4 900LM 3000K, D2W, 15° SP OPTIC, WITH ROUND PINHOLE MATTE WHITE FLANGE
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 617.7 lumens
Efficiency: N/A
Efficacy: 51.5 lumens/watt
Spacing Criteria (0/90/45): 0.45 / 0.45 / 0.44
Luminous Opening: Circular (Dia: 0.17' x H: 0')
CIE Type: Direct

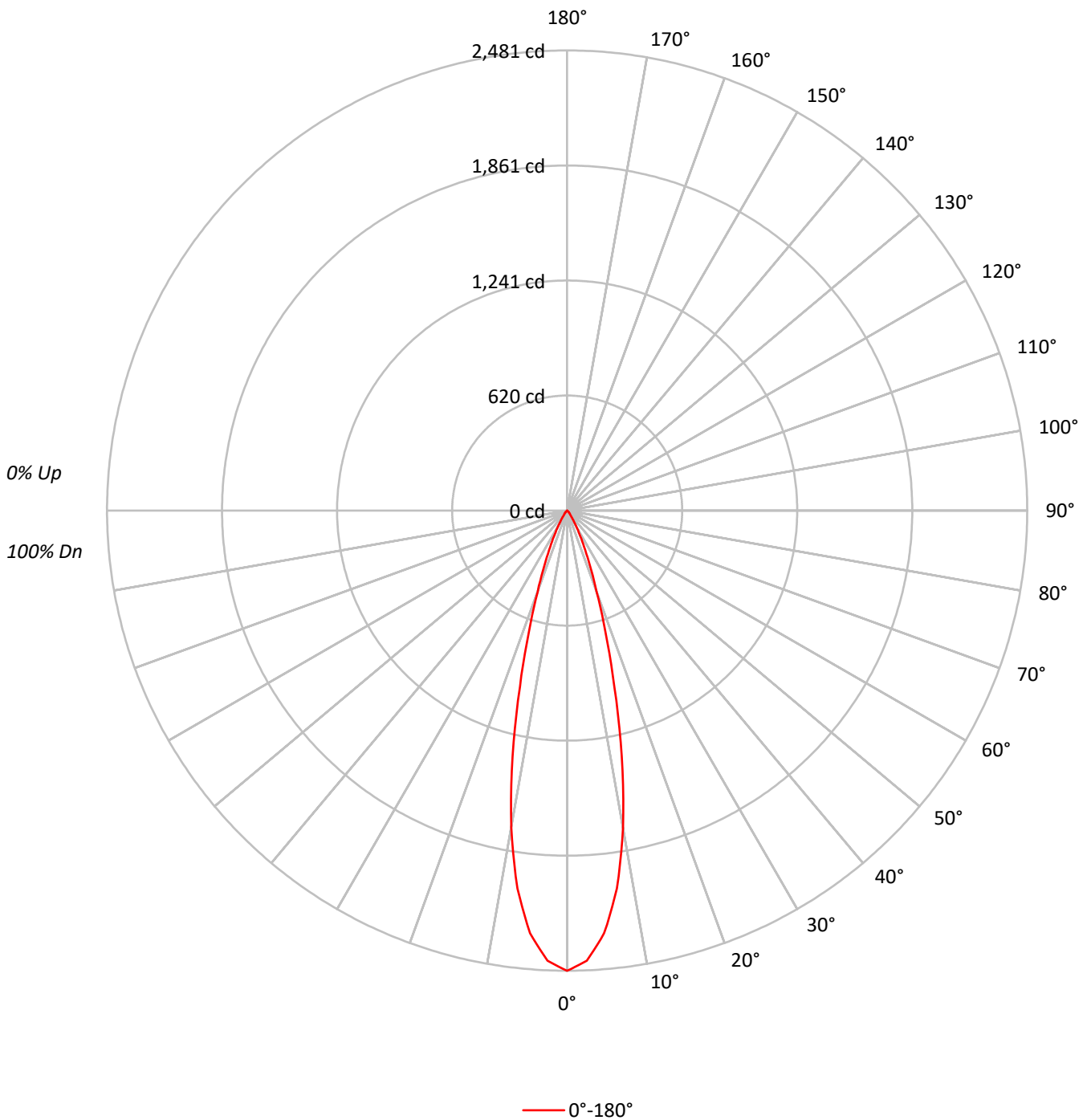
Input Watts (W): 12
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	115	113	111	109	113	111	109	107	107	105	104	103	102	101	100	99	98	96
2	111	107	104	102	109	106	103	101	103	100	98	100	98	96	97	96	94	93
3	107	103	99	96	106	101	98	95	99	96	94	96	94	92	94	92	91	90
4	104	98	94	91	102	97	94	91	95	92	90	93	91	89	92	89	88	86
5	101	95	90	87	99	94	90	87	92	89	86	91	88	85	89	87	85	84
6	98	91	87	84	96	90	86	83	89	86	83	88	85	82	87	84	82	81
7	95	88	84	81	94	87	83	80	86	83	80	85	82	80	84	81	79	78
8	92	85	81	78	91	85	81	78	84	80	77	83	80	77	82	79	77	76
9	89	82	78	75	88	82	78	75	81	78	75	80	77	75	80	77	75	74
10	87	80	76	73	86	80	76	73	79	75	73	78	75	73	78	75	73	72

AVERAGE LUMINANCE (cd/sqm):

	0°
0°	1224173
5°	1133214
10°	869620
15°	501845
20°	244250
25°	116553
30°	52413
35°	24092
40°	12237
45°	6977
50°	3070
55°	1720
60°	987
65°	1167
70°	0
75°	0
80°	0
85°	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	200.8	32.5
10°-20°	273.5	44.3
20°-30°	105.0	17.0
30°-40°	27.8	4.5
40°-50°	7.9	1.3
50°-60°	2.1	0.3
60°-70°	0.6	0.1
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°	579.3	93.8
0°-40°	607.1	98.3
0°-60°	617.1	99.9
0°-90°	617.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	617.7	100.0

CANDELA DISTRIBUTION:

	0°	Flux
0°	2481	
5°	2288	201
15°	982	273
25°	214	105
35°	40	28
45°	10	8
55°	2	2
65°	1	1
75°	0	0
85°	0	0
90°	0	



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CANDELA DISTRIBUTION (FULL):

0°	
0°	2481.2
2.5°	2429.2
5°	2288.1
7.5°	2055.0
10°	1735.8
12.5°	1357.7
15°	982.5
17.5°	683.3
20°	465.2
22.5°	315.2
25°	214.1
27.5°	142.1
30°	92.0
32.5°	60.0
35°	40.0
37.5°	27.0
40°	19.0
42.5°	14.0
45°	10.0
47.5°	6.0
50°	4.0
52.5°	3.0
55°	2.0
57.5°	2.0
60°	1.0
62.5°	1.0
65°	1.0
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
90°	0.0

(END OF REPORT)