

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: P277704

Luminaire Tested: **ML4D09\_D2WE - TIR45FL40 - TL41RMW - TL42SMW**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P277704  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-893-9)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO  
Catalog Number: ML4D09\_D2WE - TIR45FL40 - TL41RMW - TL42SMW  
Description: ML4 900LM 3000K, D2W, 40° FL 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: 616.6 lumens  
Efficiency: N/A  
Efficacy: 51.4 lumens/watt  
Spacing Criteria (0/90/45): 0.57 / 0.57 / 0.57  
Luminous Opening: Circular (Dia: 0.17' x H: 0')  
CIE Type: Direct

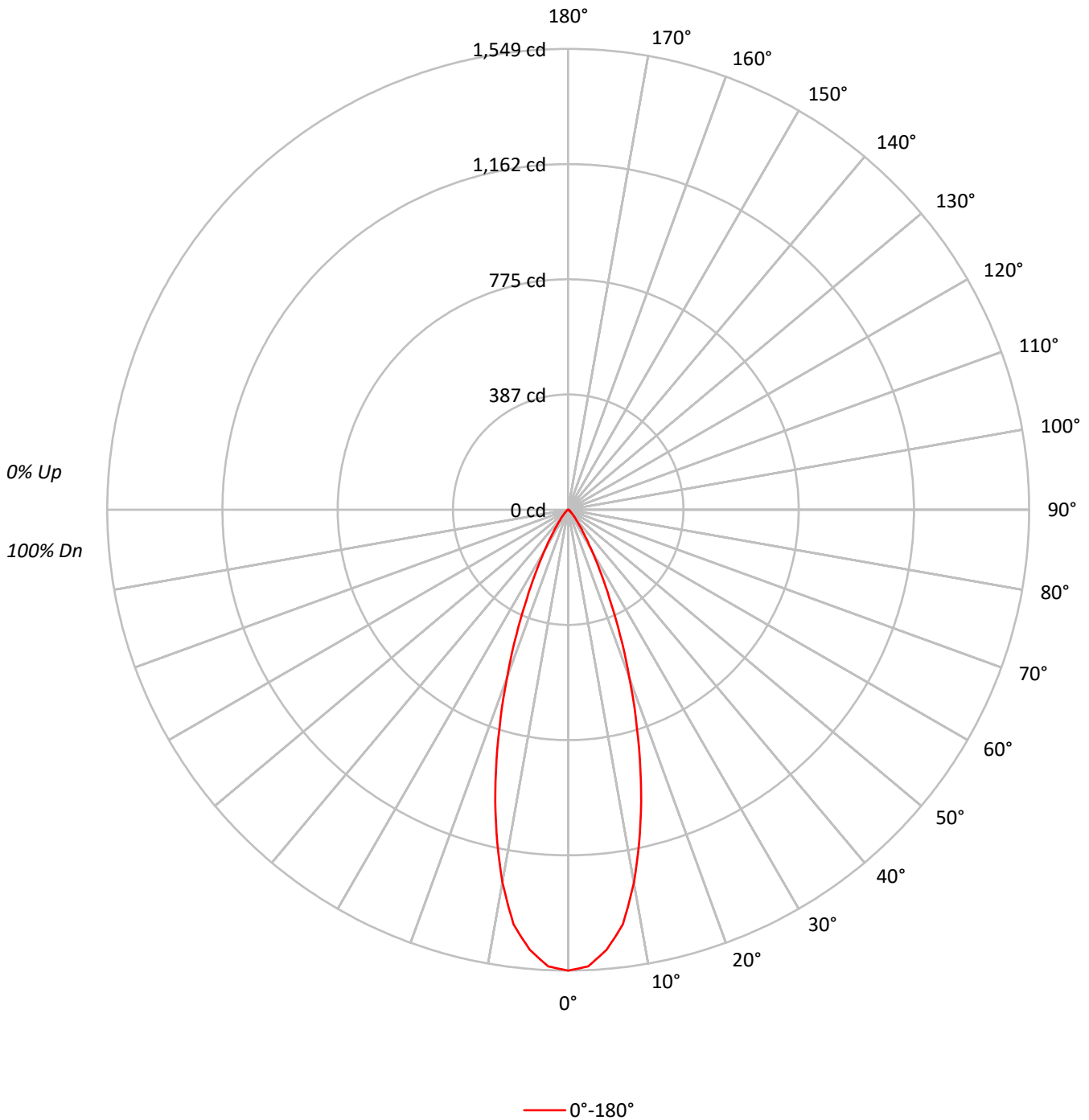
Input Watts (W): 12  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	114	112	110	108	112	110	108	106	106	104	103	102	101	100	99	98	97	95
2	110	106	102	99	108	104	101	98	101	98	96	98	96	94	95	94	92	91
3	106	100	96	93	104	99	95	92	96	93	91	94	91	89	92	90	88	86
4	102	95	91	87	100	94	90	87	92	89	86	90	87	85	88	86	84	82
5	98	91	86	82	96	90	85	82	88	84	81	87	83	81	85	82	80	79
6	94	87	82	78	93	86	81	78	85	81	78	83	80	77	82	79	77	75
7	91	83	78	75	89	82	78	74	81	77	74	80	76	74	79	76	73	72
8	87	80	75	71	86	79	74	71	78	74	71	77	73	71	76	73	70	69
9	84	76	72	68	83	76	71	68	75	71	68	74	71	68	74	70	68	67
10	81	74	69	66	81	73	69	66	72	68	65	72	68	65	71	68	65	64

**AVERAGE LUMINANCE (cd/sqm):**

	0°
0°	764442
5°	735170
10°	637410
15°	482333
20°	315656
25°	178068
30°	88874
35°	42764
40°	21898
45°	12559
50°	6908
55°	4301
60°	1974
65°	2335
70°	1443
75°	0
80°	0
85°	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	135.3	21.9
10°-20°	256.8	41.6
20°-30°	154.6	25.1
30°-40°	49.0	7.9
40°-50°	14.7	2.4
50°-60°	4.3	0.7
60°-70°	1.6	0.3
70°-80°	0.4	0.1
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°	546.6	88.6
0°-40°	595.5	96.6
0°-60°	614.6	99.7
0°-90°	616.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	616.6	100.0

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	1549	
5°	1484	135
15°	944	257
25°	327	155
35°	71	49
45°	18	15
55°	5	4
65°	2	2
75°	0	0
85°	0	0
90°	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°
0°	1549.4
2.5°	1536.4
5°	1484.4
7.5°	1405.4
10°	1272.3
12.5°	1113.3
15°	944.3
17.5°	767.2
20°	601.2
22.5°	453.1
25°	327.1
27.5°	229.1
30°	156.0
32.5°	106.0
35°	71.0
37.5°	49.0
40°	34.0
42.5°	25.0
45°	18.0
47.5°	13.0
50°	9.0
52.5°	6.0
55°	5.0
57.5°	3.0
60°	2.0
62.5°	2.0
65°	2.0
67.5°	1.0
70°	1.0
72.5°	1.0
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)