

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: P300516

Luminaire Tested: **ML4D09\_27D2WE - TIR45FL40 - TL41RORB - TL42SORB**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P300516  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-1902-156-28)  
Test Lab: INNOVATION CENTER(G1)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO  
Catalog Number: ML4D09\_27D2WE - TIR45FL40 - TL41RORB - TL42SORB  
Description: ML4 2700K, 900LM DIM-TO-WARM, 40 DEG FL OPTIC, WITH ROUND/SQUARE PINHOLE OIL RUBBED BRONZE FLANGE  
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 541.0 lumens  
Efficiency: N/A  
Efficacy: 48.3 lumens/watt  
Spacing Criteria (0/90/45): 0.58 / 0.58 / 0.56  
Luminous Opening: Circular (Dia: 0.19' x H: 0')  
CIE Type: Direct

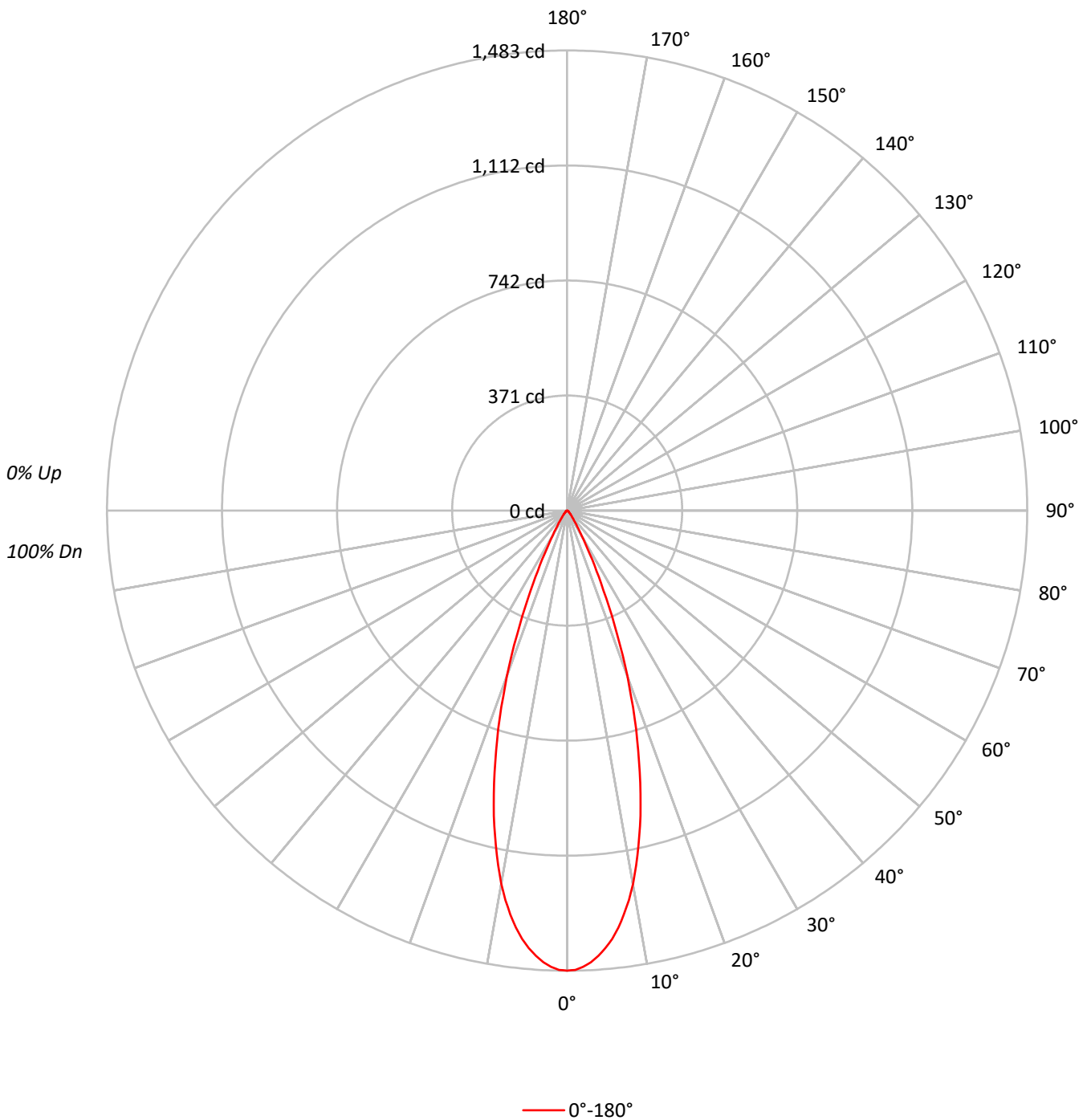
Input Watts (W): 11.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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

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

	0°
0°	578043
5°	554033
10°	483645
15°	366818
20°	235179
25°	110544
30°	42313
35°	18560
40°	10178
45°	6064
50°	3639
55°	2039
60°	780
65°	922
70°	0
75°	0
80°	0
85°	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	129.0	23.8
10°-20°	246.2	45.5
20°-30°	125.4	23.2
30°-40°	27.9	5.2
40°-50°	9.0	1.7
50°-60°	3.0	0.6
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°	500.6	92.5
0°-40°	528.5	97.7
0°-60°	540.4	99.9
0°-90°	541.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	541.0	100.0

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	1483	
5°	1416	129
15°	909	246
25°	257	125
35°	39	28
45°	11	9
55°	3	3
65°	1	1
75°	0	0
85°	0	0
90°	0	



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**CANDELA DISTRIBUTION (FULL):**

0°	
0°	1482.8
1°	1480.8
2°	1471.8
3°	1457.8
4°	1438.8
5°	1415.8
6°	1387.8
7°	1353.8
8°	1314.8
9°	1270.8
10°	1221.8
11°	1164.8
12°	1103.8
13°	1044.8
14°	977.9
15°	908.9
16°	839.9
17°	772.9
18°	703.9
19°	632.9
20°	566.9
21°	499.9
22°	430.9
23°	368.9
24°	310.0
25°	257.0
27.5°	157.0
30°	94.0
32.5°	60.0
35°	39.0
37.5°	27.0
40°	20.0
42.5°	15.0
45°	11.0
47.5°	8.0
50°	6.0
52.5°	5.0
55°	3.0
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



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**CANDELA DISTRIBUTION (continued):**

	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)