

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: P300492

Luminaire Tested: **ML4D09\_27D2WE - TIR45NFL25 - TL43R2GMWWB - TL44S2GMWWB**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P300492  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-1902-156-2)  
Test Lab: INNOVATION CENTER(G1)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO  
Catalog Number: ML4D09\_27D2WE - TIR45NFL25 - TL43R2GMWWB - TL44S2GMWWB  
Description: ML4 2700K, 900LM DIM-TO-WARM, 25 DEG NFL OPTIC, WITH ROUND/SQUARE DIFFUSED CLEAR LENS, MATTE WHITE FLANGE, WHITE LENS FRAME  
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 495.0 lumens  
Efficiency: N/A  
Efficacy: 44.2 lumens/watt  
Spacing Criteria (0/90/45): 0.46 / 0.46 / 0.46  
Luminous Opening: Circular (Dia: 0.19' x H: 0')  
CIE Type: Direct

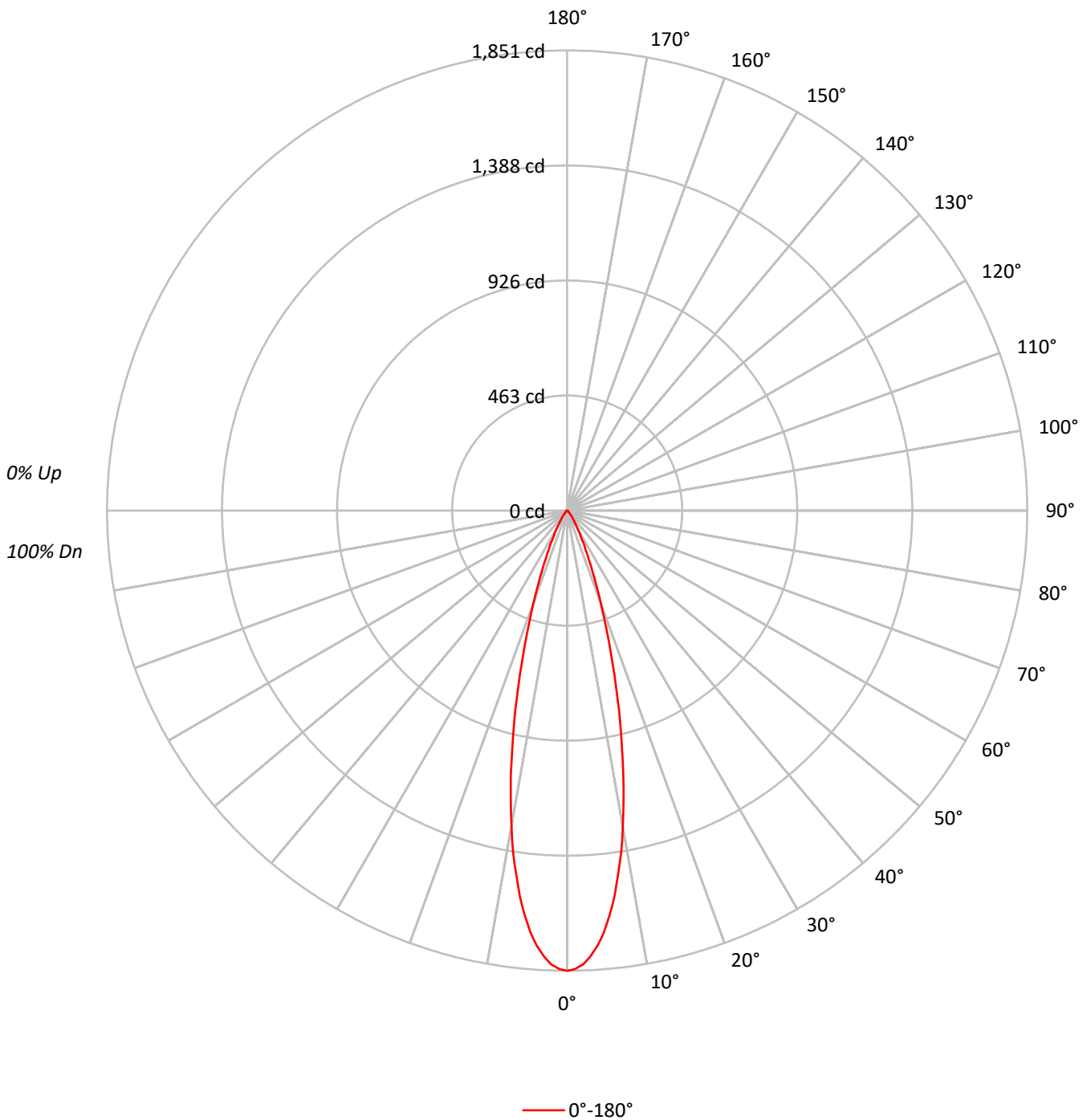
Input Watts (W): 11.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	109	112	110	108	107	106	105	104	103	102	100	99	98	98	96
2	111	107	103	101	108	105	102	100	102	100	97	99	97	95	96	95	93	92
3	107	102	98	95	105	100	97	94	98	95	92	95	93	91	93	91	90	88
4	103	97	93	90	101	96	92	89	94	91	88	92	89	87	91	88	86	85
5	100	93	89	85	98	92	88	85	91	87	84	89	86	84	88	85	83	82
6	96	90	85	82	95	89	85	82	88	84	81	86	83	81	85	82	80	79
7	93	86	82	79	92	86	81	78	85	81	78	84	80	78	83	80	77	76
8	90	83	79	76	89	83	79	76	82	78	75	81	78	75	80	77	75	74
9	88	81	76	73	87	80	76	73	79	76	73	79	75	73	78	75	72	71
10	85	78	74	71	84	78	74	71	77	73	71	76	73	70	76	73	70	69

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

	0°
0°	721580
5°	665990
10°	510919
15°	317379
20°	163534
25°	78327
30°	37362
35°	19036
40°	10687
45°	6064
50°	3639
55°	2719
60°	1559
65°	1845
70°	1140
75°	1506
80°	2245
85°	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	149.1	30.1
10°-20°	213.9	43.2
20°-30°	89.1	18.0
30°-40°	27.2	5.5
40°-50°	9.0	1.8
50°-60°	3.6	0.7
60°-70°	1.6	0.3
70°-80°	1.1	0.2
80°-90°	0.4	0.1
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°	452.1	91.3
0°-40°	479.3	96.8
0°-60°	491.9	99.4
0°-90°	495.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	495.0	100.0

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	1851	
5°	1702	149
15°	786	214
25°	182	89
35°	40	27
45°	11	9
55°	4	4
65°	2	2
75°	1	1
85°	0	0
90°	0	



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**CANDELA DISTRIBUTION (FULL):**

0°	
0°	1851.0
1°	1844.0
2°	1827.0
3°	1796.0
4°	1753.9
5°	1701.9
6°	1635.9
7°	1561.8
8°	1475.8
9°	1390.8
10°	1290.7
11°	1187.6
12°	1088.6
13°	982.5
14°	881.5
15°	786.4
16°	690.4
17°	602.3
18°	526.3
19°	454.2
20°	394.2
21°	338.2
22°	290.2
23°	249.1
24°	213.1
25°	182.1
27.5°	122.1
30°	83.0
32.5°	57.0
35°	40.0
37.5°	29.0
40°	21.0
42.5°	15.0
45°	11.0
47.5°	8.0
50°	6.0
52.5°	5.0
55°	4.0
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



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**CANDELA DISTRIBUTION (continued):**

	0°
75°	1.0
77.5°	1.0
80°	1.0
82.5°	1.0
85°	0.0
87.5°	0.0
90°	0.0

(END OF REPORT)