

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: P300494

Luminaire Tested: **ML4D09_27D2WE - TIR45NFL25 - TL43R2GMBBB - TL44S2GMBBB**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P300494
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-1902-156-4)
Test Lab: INNOVATION CENTER(G1)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO
Catalog Number: ML4D09_27D2WE - TIR45NFL25 - TL43R2GMBBB - TL44S2GMBBB
Description: ML4 2700K, 900LM DIM-TO-WARM, 25 DEG NFL OPTIC, WITH ROUND/SQUARE
DIFFUSED CLEAR LENS, MATTE BLACK FLANGE, BLACK LENS FRAME
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 492.0 lumens
Efficiency: N/A
Efficacy: 43.9 lumens/watt
Spacing Criteria (0/90/45): 0.45 / 0.45 / 0.45
Luminous Opening: Circular (Dia: 0.19' x H: 0')
CIE Type: Direct

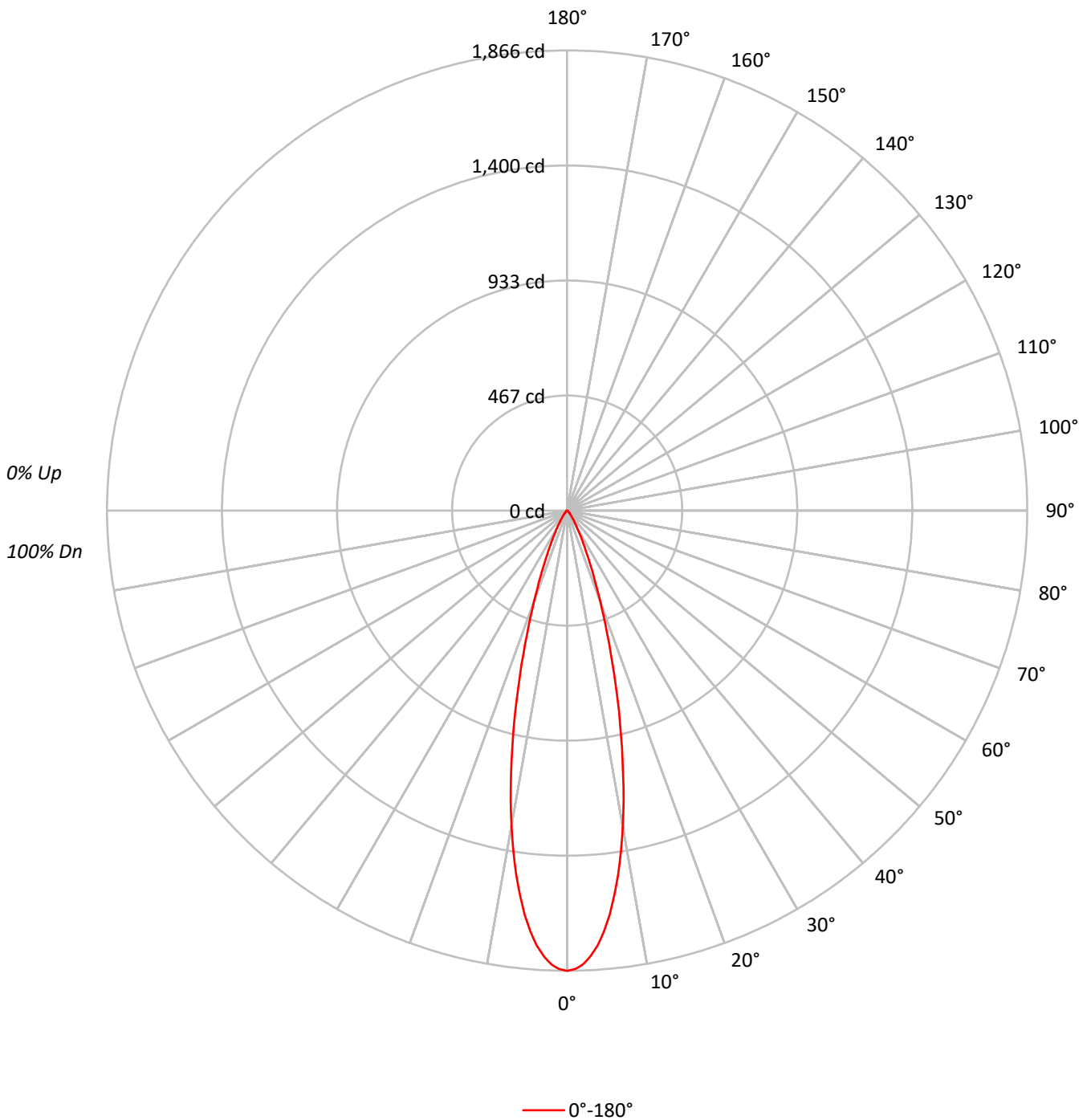
Input Watts (W): 11.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	113	111	109	112	110	109	107	106	105	104		103	102	101		99	99	98	96
2	111	107	104	101	109	105	102	100	102	100	98		99	97	96		97	95	94	92
3	107	102	98	95	105	101	97	94	98	95	93		96	94	92		94	92	90	89
4	103	98	93	90	102	97	93	90	95	91	89		93	90	88		91	89	87	85
5	100	94	89	86	98	93	89	86	91	88	85		90	87	84		88	86	84	82
6	97	90	86	82	95	89	85	82	88	84	82		87	84	81		86	83	81	80
7	94	87	82	79	93	86	82	79	85	81	79		84	81	78		83	80	78	77
8	91	84	79	76	90	83	79	76	82	79	76		82	78	76		81	78	75	74
9	88	81	77	74	87	81	77	74	80	76	73		79	76	73		78	75	73	72
10	86	79	74	71	85	78	74	71	78	74	71		77	73	71		76	73	71	70

AVERAGE LUMINANCE (cd/sqm):

	0°
0°	727622
5°	670138
10°	514758
15°	317298
20°	163078
25°	77424
30°	36461
35°	18560
40°	10178
45°	6064
50°	3032
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°	150.1	30.5
10°-20°	214.8	43.7
20°-30°	88.2	17.9
30°-40°	26.5	5.4
40°-50°	8.8	1.8
50°-60°	2.7	0.5
60°-70°	0.9	0.2
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°	453.1	92.1
0°-40°	479.6	97.5
0°-60°	491.1	99.8
0°-90°	492.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	492.0	100.0

CANDELA DISTRIBUTION:

	0°	Flux
0°	1866	
5°	1712	150
15°	786	215
25°	180	88
35°	39	27
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°	1866.5
1°	1859.5
2°	1841.5
3°	1810.5
4°	1768.5
5°	1712.5
6°	1647.4
7°	1571.4
8°	1489.4
9°	1396.4
10°	1300.4
11°	1200.3
12°	1092.3
13°	987.3
14°	887.2
15°	786.2
16°	693.2
17°	605.2
18°	525.1
19°	455.1
20°	393.1
21°	337.1
22°	288.1
23°	247.1
24°	211.1
25°	180.0
27.5°	120.0
30°	81.0
32.5°	56.0
35°	39.0
37.5°	28.0
40°	20.0
42.5°	15.0
45°	11.0
47.5°	8.0
50°	5.0
52.5°	4.0
55°	3.0
57.5°	2.0
60°	1.0
62.5°	1.0
65°	1.0
67.5°	1.0
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)