

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: P300503

Luminaire Tested: **ML4D09_27D2WE - TIR45NFL25 - TL41RBCU - TL42SBCU**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P300503
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-1902-156-13)
Test Lab: INNOVATION CENTER(G1)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO
Catalog Number: ML4D09_27D2WE - TIR45NFL25 - TL41RBCU - TL42SBCU
Description: ML4 2700K, 900LM DIM-TO-WARM, 25 DEG NFL OPTIC, WITH ROUND/SQUARE PINHOLE BRUSHED COPPER FLANGE
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 517.0 lumens
Efficiency: N/A
Efficacy: 46.2 lumens/watt
Spacing Criteria (0/90/45): 0.46 / 0.46 / 0.44
Luminous Opening: Circular (Dia: 0.21' x H: 0')
CIE Type: Direct

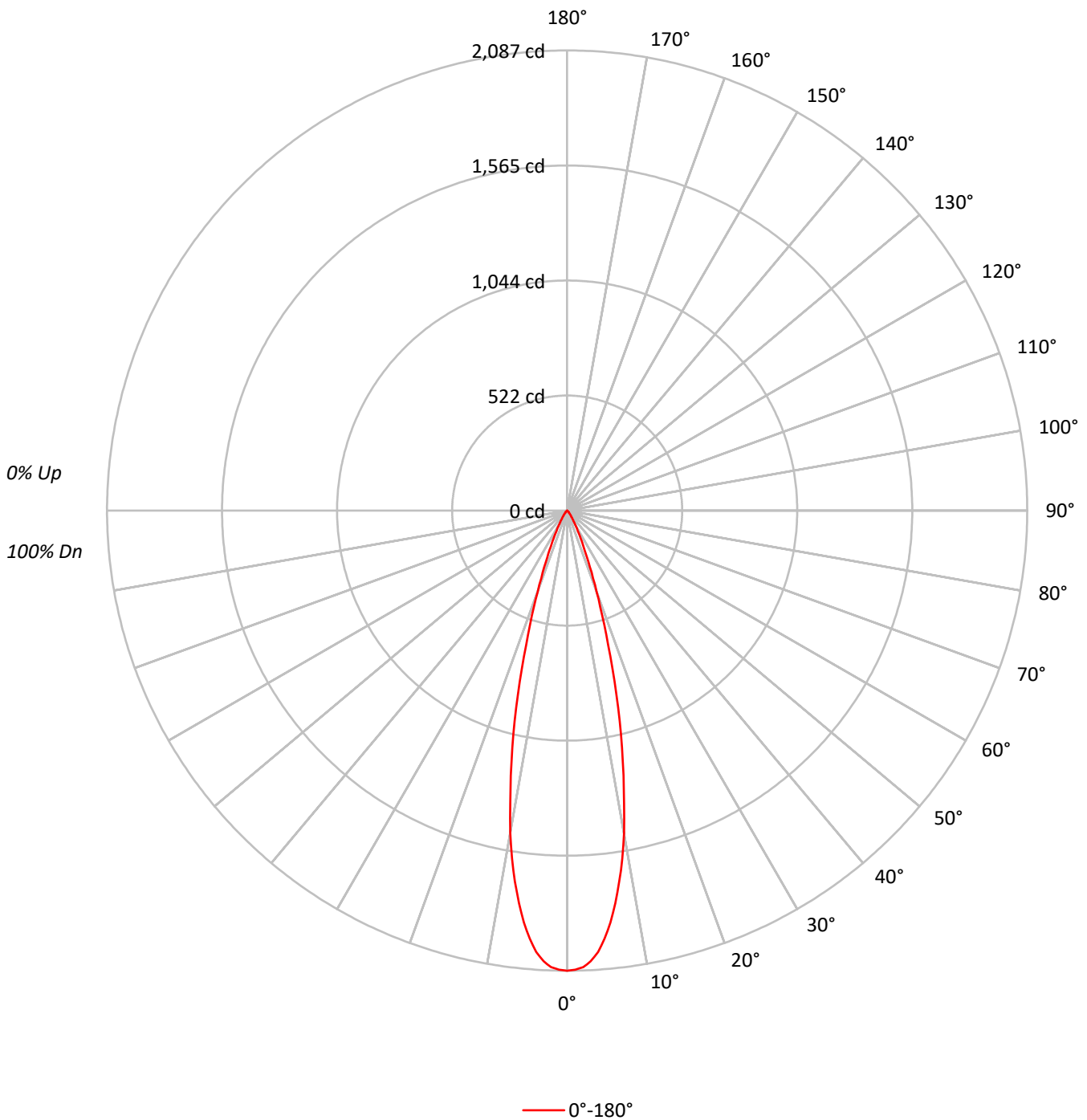
Input Watts (W): 11.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°
0°	659034
5°	617841
10°	476049
15°	281857
20°	131589
25°	57104
30°	25122
35°	12335
40°	6595
45°	3572
50°	1474
55°	1101
60°	632
65°	0
70°	0
75°	0
80°	0
85°	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	170.9	33.1
10°-20°	234.1	45.3
20°-30°	81.9	15.8
30°-40°	21.9	4.2
40°-50°	6.4	1.2
50°-60°	1.6	0.3
60°-70°	0.4	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°	486.9	94.2
0°-40°	508.8	98.4
0°-60°	516.7	99.9
0°-90°	517.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	517.0	100.0

CANDELA DISTRIBUTION:

	0°	Flux
0°	2087	
5°	1949	171
15°	862	234
25°	164	82
35°	32	22
45°	8	6
55°	2	2
65°	0	0
75°	0	0
85°	0	0
90°	0	



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CANDELA DISTRIBUTION (FULL):

0°	
0°	2087.1
1°	2083.1
2°	2072.1
3°	2047.2
4°	2007.2
5°	1949.2
6°	1878.3
7°	1793.4
8°	1699.5
9°	1598.6
10°	1484.7
11°	1354.8
12°	1227.9
13°	1104.0
14°	983.1
15°	862.2
16°	746.3
17°	637.4
18°	544.5
19°	461.6
20°	391.6
21°	327.7
22°	276.8
23°	231.8
24°	194.8
25°	163.9
27.5°	104.9
30°	68.9
32.5°	47.0
35°	32.0
37.5°	22.0
40°	16.0
42.5°	11.0
45°	8.0
47.5°	5.0
50°	3.0
52.5°	2.0
55°	2.0
57.5°	1.0
60°	1.0
62.5°	1.0
65°	0.0
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)