

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: P300478

Luminaire Tested: **ML4D09_27D2WE - TIR45SP15 - TL43R2GMWBB - TL44S2GMWBB**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P300478
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-1902-156-58)
Test Lab: INNOVATION CENTER(G1)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO
Catalog Number: ML4D09_27D2WE - TIR45SP15 - TL43R2GMWBB - TL44S2GMWBB
Description: ML4 2700K, 900LM DIM-TO-WARM, 15 DEG SP OPTIC, WITH ROUND/SQUARE
DIFFUSED CLEAR LENS, MATTE WHITE 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: 460.0 lumens
Efficiency: N/A
Efficacy: 41.1 lumens/watt
Spacing Criteria (0/90/45): 0.33 / 0.33 / 0.34
Luminous Opening: Circular (Dia: 0.19' x H: 0')
CIE Type: Direct

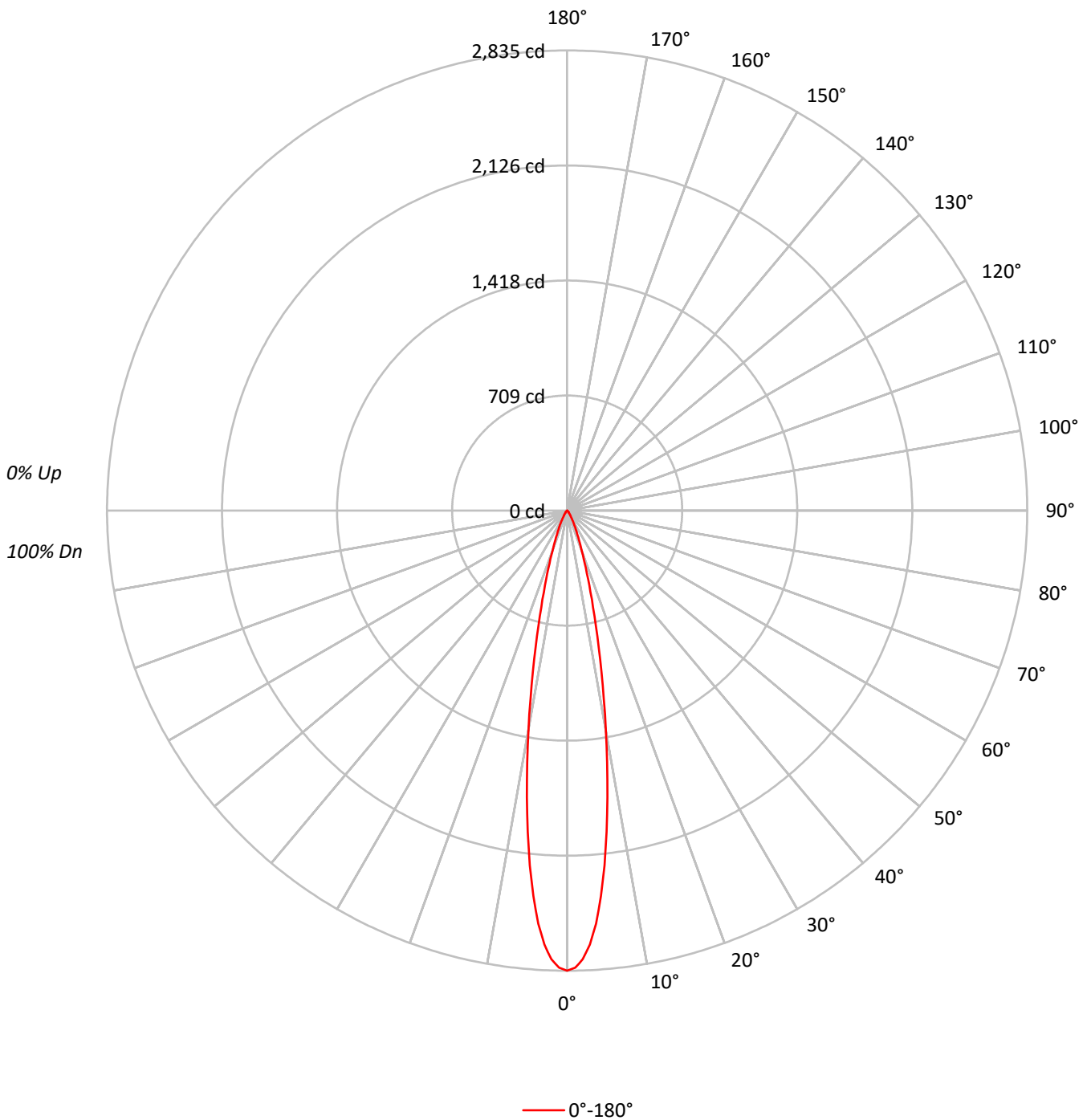
Input Watts (W): 11.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	110	113	111	109	108	107	106	105		103	102	101		100	99	99	97
2	111	108	105	103	109	106	104	101	103	101	99		100	99	97		98	96	95	94
3	108	104	100	97	106	102	99	96	100	97	95		98	95	94		95	94	92	91
4	105	100	96	93	103	99	95	92	97	94	91		95	92	90		93	91	89	88
5	102	96	92	89	101	95	92	89	94	91	88		92	90	88		91	89	87	86
6	99	93	89	86	98	92	89	86	91	88	85		90	87	85		89	86	84	83
7	97	90	86	84	96	90	86	83	89	85	83		88	85	83		87	84	82	81
8	94	88	84	81	93	87	84	81	86	83	81		86	83	80		85	82	80	79
9	92	85	82	79	91	85	81	79	84	81	79		84	81	78		83	80	78	77
10	90	83	80	77	89	83	79	77	82	79	77		82	79	77		81	78	76	76

AVERAGE LUMINANCE (cd/sqm):

	0°
0°	1105097
5°	932754
10°	543457
15°	248769
20°	111263
25°	52519
30°	26108
35°	13801
40°	7633
45°	3859
50°	2426
55°	1359
60°	780
65°	922
70°	0
75°	0
80°	0
85°	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	193.4	42.0
10°-20°	178.3	38.8
20°-30°	60.0	13.0
30°-40°	19.3	4.2
40°-50°	6.0	1.3
50°-60°	2.1	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°	431.7	93.8
0°-40°	451.0	98.1
0°-60°	459.1	99.8
0°-90°	460.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	460.0	100.0

CANDELA DISTRIBUTION:

	0°	Flux
0°	2835	
5°	2384	193
15°	616	178
25°	122	60
35°	29	19
45°	7	6
55°	2	2
65°	1	1
75°	0	0
85°	0	0
90°	0	



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CANDELA DISTRIBUTION (FULL):

0°	
0°	2834.8
1°	2816.8
2°	2765.8
3°	2676.7
4°	2551.7
5°	2383.6
6°	2198.4
7°	1994.3
8°	1783.2
9°	1569.0
10°	1372.9
11°	1181.8
12°	1014.7
13°	861.6
14°	728.5
15°	616.4
16°	521.3
17°	440.3
18°	370.2
19°	316.2
20°	268.2
21°	227.1
22°	193.1
23°	165.1
24°	141.1
25°	122.1
27.5°	84.1
30°	58.0
32.5°	41.0
35°	29.0
37.5°	20.0
40°	15.0
42.5°	10.0
45°	7.0
47.5°	5.0
50°	4.0
52.5°	3.0
55°	2.0
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)