

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: P300507

Luminaire Tested: **ML4D09_27D2WE - TIR45FL40 - TL43R2GMWWB - TL44S2GMWWB**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P300507
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-1902-156-19)
Test Lab: INNOVATION CENTER(G1)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO
Catalog Number: ML4D09_27D2WE - TIR45FL40 - TL43R2GMWWB - TL44S2GMWWB
Description: ML4 2700K, 900LM DIM-TO-WARM, 40 DEG FL 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: 520.0 lumens
Efficiency: N/A
Efficacy: 46.4 lumens/watt
Spacing Criteria (0/90/45): 0.58 / 0.58 / 0.57
Luminous Opening: Circular (Dia: 0.19' x H: 0')
CIE Type: Direct

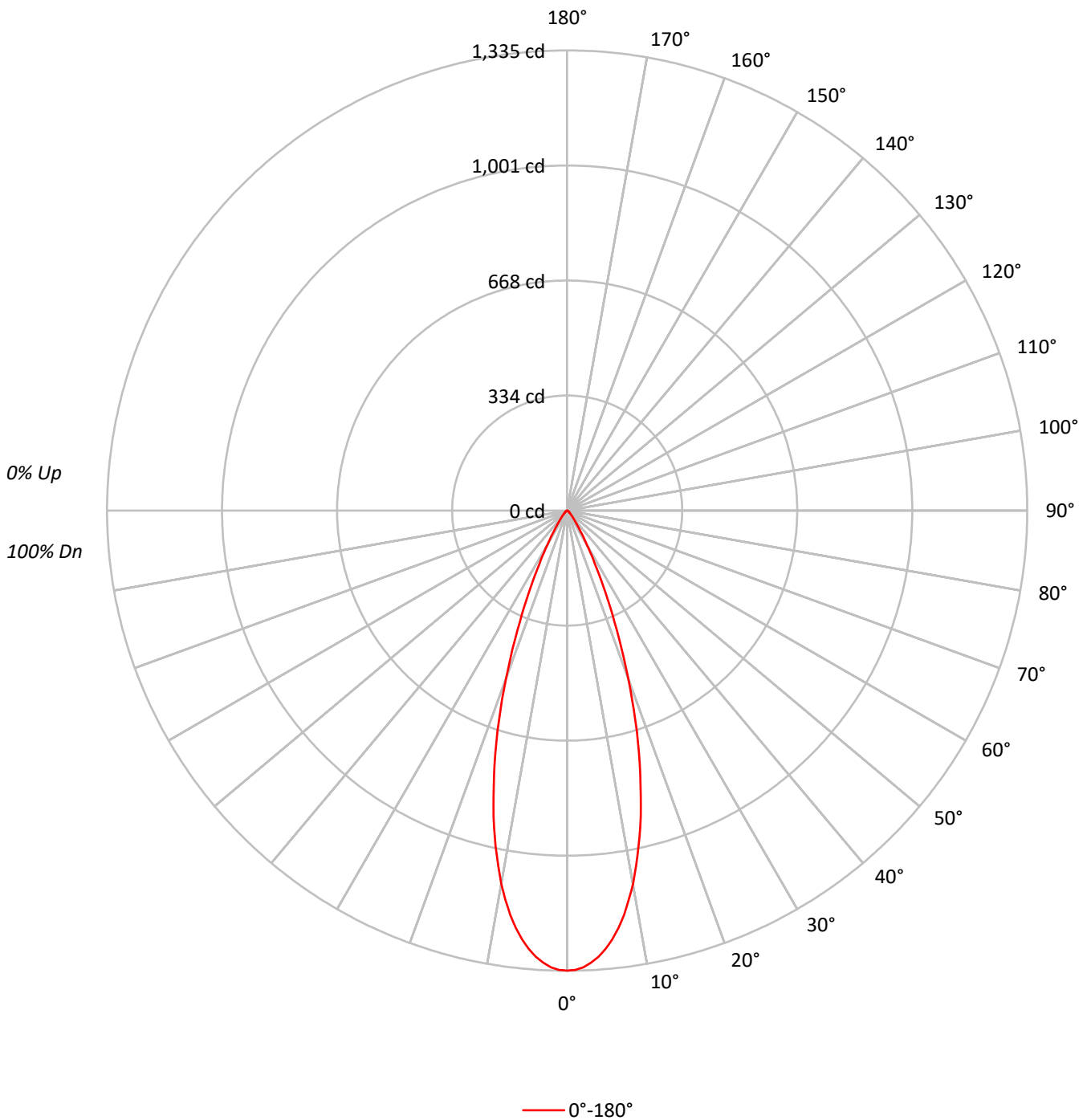
Input Watts (W): 11.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				100
1	114	112	110	108	112	110	108	106	106	104	103	102	101	100	99	98	97	95				95
2	110	106	102	99	108	104	101	98	101	98	96	98	96	94	95	94	92	91				91
3	106	100	96	93	104	99	95	92	96	93	91	94	91	89	92	90	88	86				86
4	102	95	91	87	100	94	90	87	92	89	86	90	87	85	88	86	84	82				82
5	98	91	86	83	96	90	86	82	88	84	81	87	83	81	85	82	80	79				79
6	94	87	82	78	93	86	82	78	85	81	78	83	80	77	82	79	77	76				76
7	91	83	78	75	90	83	78	75	81	77	74	80	77	74	79	76	74	72				72
8	88	80	75	72	87	79	75	72	78	74	71	77	74	71	77	73	71	70				70
9	85	77	72	69	84	76	72	69	75	71	68	75	71	68	74	71	68	67				67
10	82	74	69	66	81	74	69	66	73	69	66	72	68	66	71	68	66	64				64

AVERAGE LUMINANCE (cd/sqm):

	0°
0°	520348
5°	499639
10°	435312
15°	332352
20°	214602
25°	113211
30°	51361
35°	23795
40°	12722
45°	7718
50°	5458
55°	4078
60°	2339
65°	1845
70°	2280
75°	1506
80°	2245
85°	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	116.2	22.4
10°-20°	223.2	42.9
20°-30°	124.9	24.0
30°-40°	34.9	6.7
40°-50°	11.6	2.2
50°-60°	5.1	1.0
60°-70°	2.3	0.5
70°-80°	1.2	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°	464.4	89.3
0°-40°	499.3	96.0
0°-60°	516.0	99.2
0°-90°	520.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	520.0	100.0

CANDELA DISTRIBUTION:

	0°	Flux
0°	1335	
5°	1277	116
15°	824	223
25°	263	125
35°	50	35
45°	14	12
55°	6	5
65°	2	2
75°	1	1
85°	0	0
90°	0	



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CANDELA DISTRIBUTION (FULL):

	0°
0°	1334.8
1°	1332.8
2°	1325.8
3°	1313.8
4°	1297.8
5°	1276.8
6°	1250.8
7°	1220.7
8°	1184.7
9°	1143.7
10°	1099.7
11°	1048.6
12°	996.6
13°	943.6
14°	883.5
15°	823.5
16°	763.5
17°	703.4
18°	641.4
19°	579.3
20°	517.3
21°	461.3
22°	405.2
23°	352.2
24°	306.2
25°	263.2
27.5°	174.1
30°	114.1
32.5°	74.0
35°	50.0
37.5°	35.0
40°	25.0
42.5°	19.0
45°	14.0
47.5°	11.0
50°	9.0
52.5°	7.0
55°	6.0
57.5°	4.0
60°	3.0
62.5°	3.0
65°	2.0
67.5°	2.0
70°	2.0
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)