

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: P189491

Luminaire Tested: **ML4D09NFL940-TIR50NFL25-TL43R2G_X_TL44S2GX**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P189491
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P189395)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO
Catalog Number: ML4D09NFL940-TIR50NFL25-TL43R2G_X_TL44S2GX
Description: ML4 RECESSED DOWNLIGHT WITH 25° NARROW FLOOD OPTIC WITH LENSED ROUND (OR SQUARE)
Light Source: CITIZEN 4000K
CLU711
Ballast/Driver: UNV-120-277 ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 954.8 lumens
Efficiency: N/A
Efficacy: 79.2 lumens/watt
Spacing Criteria (0/90/45): 0.39 / 0.39 / 0.37
Luminous Opening: Point Source (0' x 0' x 0')
CIE Type: Direct

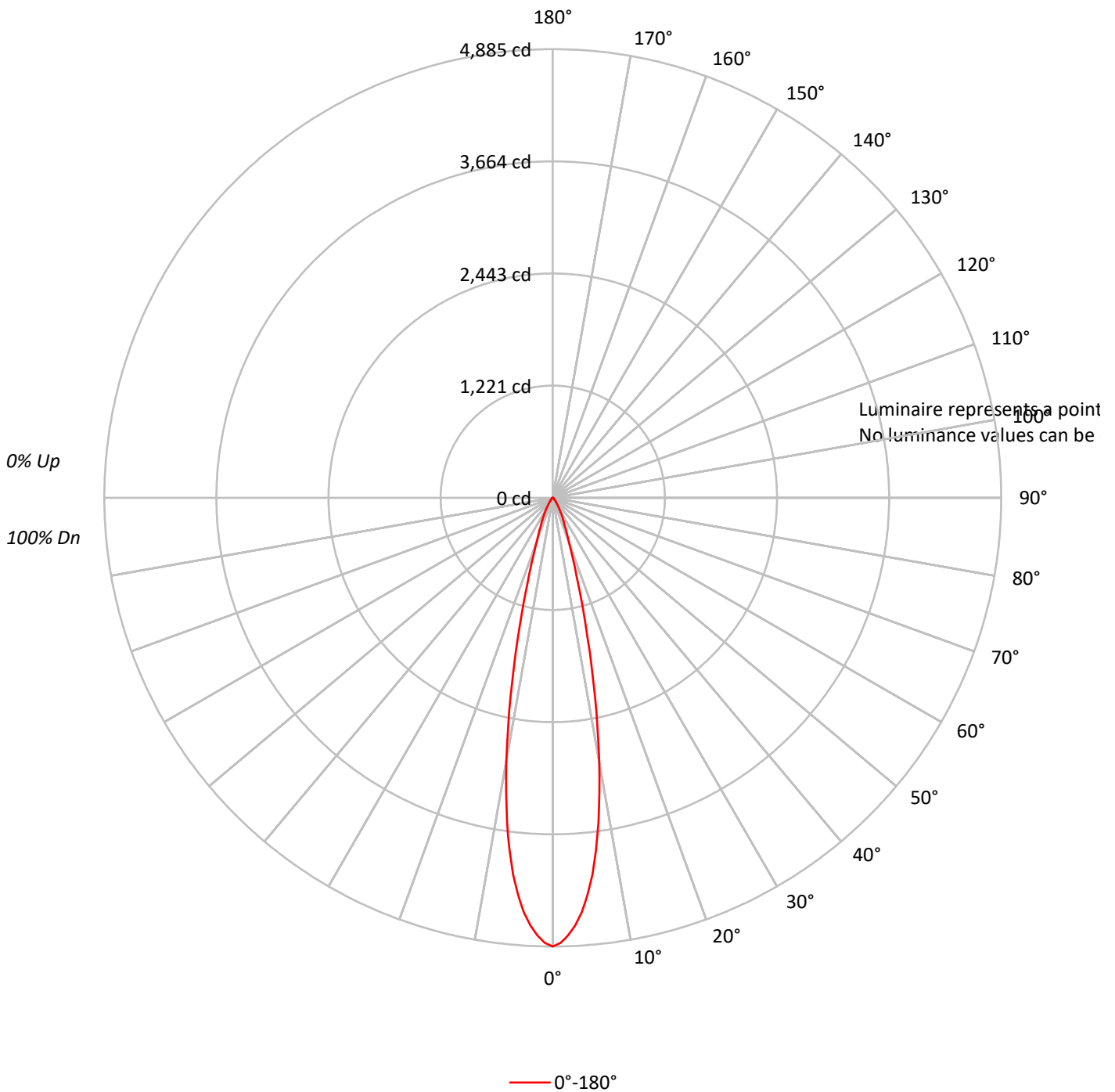
Input Watts (W): 12.06
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





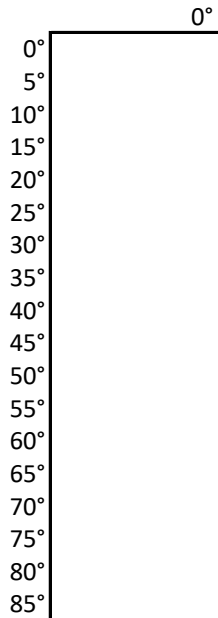
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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

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

AVERAGE LUMINANCE (cd/sqm):





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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	368.2	38.6
10°-20°	374.7	39.2
20°-30°	130.2	13.6
30°-40°	50.0	5.2
40°-50°	17.2	1.8
50°-60°	6.5	0.7
60°-70°	3.8	0.4
70°-80°	2.8	0.3
80°-90°	1.4	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°	873.1	91.4
0°-40°	923.1	96.7
0°-60°	946.9	99.2
0°-90°	954.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	954.8	100.0

CANDELA DISTRIBUTION:

	0°	Flux
0°	4885	
5°	4341	368
15°	1298	375
25°	274	130
35°	75	50
45°	20	17
55°	7	7
65°	4	4
75°	3	3
85°	1	1
90°	0	



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CANDELA DISTRIBUTION (FULL):

0°	
0°	4885.2
1°	4846.8
2°	4768.8
3°	4662.5
4°	4524.8
5°	4340.6
6°	4123.8
7°	3867.7
8°	3571.0
9°	3247.1
10°	2906.9
11°	2555.5
12°	2207.3
13°	1872.1
14°	1567.4
15°	1298.0
16°	1072.2
17°	885.9
18°	733.0
19°	616.7
20°	525.5
21°	452.5
22°	394.9
23°	348.3
24°	307.8
25°	274.4
26°	243.0
27°	214.7
28°	188.3
29°	165.1
30°	144.7
32.5°	104.3
35°	74.9
37.5°	54.7
40°	40.5
42.5°	29.4
45°	20.2
47.5°	15.2
50°	11.1
52.5°	8.1
55°	7.1
57.5°	6.0
60°	5.1
62.5°	4.1
65°	4.1



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CANDELA DISTRIBUTION (continued):

	0°
67.5°	3.0
70°	3.0
72.5°	3.0
75°	3.0
77.5°	2.0
80°	2.0
82.5°	2.0
85°	1.0
87.5°	1.0
90°	0.0

(END OF REPORT)