

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: P189469

Luminaire Tested: **ML4D09NFL927-TIR50WFL55-TL43R2G_X_TL44S2GX**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P189469
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P189407)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO
Catalog Number: ML4D09NFL927-TIR50WFL55-TL43R2G_X_TL44S2GX
Description: ML4 RECESSED DOWNLIGHT WITH 55° WIDE FLOOD OPTIC WITH LENSED ROUND (OR SQUARE)
Light Source: CITIZEN 2700K
CLU711
Ballast/Driver: UNV-120-277 ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 810.4 lumens
Efficiency: N/A
Efficacy: 65.9 lumens/watt
Spacing Criteria (0/90/45): 0.78 / 0.78 / 0.82
Luminous Opening: Point Source (0' x 0' x 0')
CIE Type: Direct

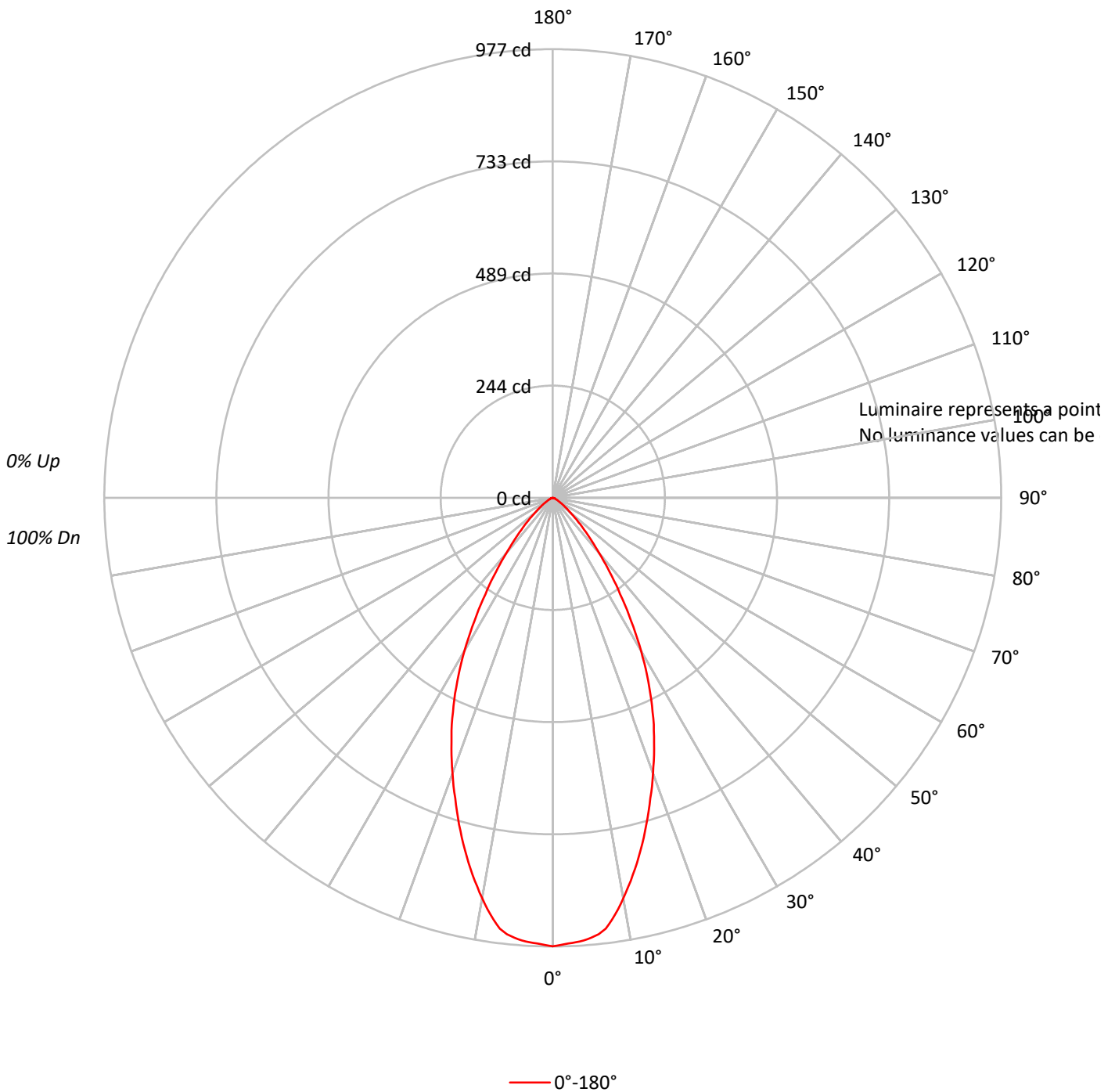
Input Watts (W): 12.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





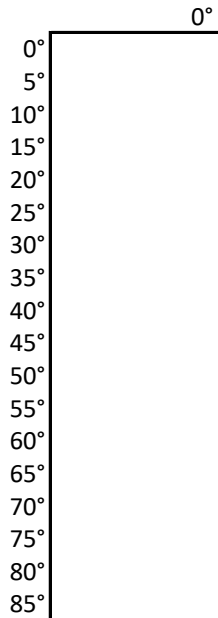
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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

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	113	110	108	105	111	108	106	104	104	102	100		100	99	97		97	96	95	93
2	107	102	98	94	105	100	97	93	97	94	91		94	92	89		91	89	87	86
3	101	95	90	85	99	93	89	85	91	87	83		88	85	82		86	83	81	79
4	96	88	82	78	94	87	82	77	85	80	77		83	79	76		81	78	75	73
5	91	82	76	72	89	81	76	71	79	74	71		78	73	70		76	72	69	68
6	86	77	71	66	85	76	70	66	75	69	66		73	69	65		72	68	65	63
7	82	72	66	62	80	71	66	61	70	65	61		69	64	61		68	64	60	59
8	78	68	62	57	76	67	61	57	66	61	57		65	60	57		64	60	57	55
9	74	64	58	54	73	64	58	54	63	57	54		62	57	53		61	56	53	52
10	70	60	55	51	69	60	54	50	59	54	50		58	54	50		58	53	50	49

AVERAGE LUMINANCE (cd/sqm):





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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	89.5	11.0
10°-20°	212.8	26.3
20°-30°	234.2	28.9
30°-40°	161.8	20.0
40°-50°	73.7	9.1
50°-60°	26.2	3.2
60°-70°	8.7	1.1
70°-80°	2.9	0.4
80°-90°	0.6	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°	536.5	66.2
0°-40°	698.3	86.2
0°-60°	798.2	98.5
0°-90°	810.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	810.4	100.0

CANDELA DISTRIBUTION:

	0°	Flux
0°	977	
5°	962	90
15°	766	213
25°	515	234
35°	256	162
45°	92	74
55°	28	26
65°	8	9
75°	3	3
85°	1	1
90°	0	



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CANDELA DISTRIBUTION (FULL):

0°	
0°	976.6
1°	973.8
2°	971.1
3°	969.2
4°	966.4
5°	961.8
6°	955.4
7°	945.2
8°	927.8
9°	907.6
10°	885.6
11°	862.6
12°	839.6
13°	815.6
14°	790.8
15°	766.0
16°	740.2
17°	714.5
18°	687.8
19°	663.9
20°	638.2
21°	614.2
22°	589.5
23°	564.6
24°	540.7
25°	514.9
26°	490.1
27°	463.4
28°	437.7
29°	411.0
30°	384.4
32.5°	317.3
35°	255.6
37.5°	204.1
40°	157.2
42.5°	121.4
45°	92.0
47.5°	69.0
50°	50.6
52.5°	37.7
55°	27.6
57.5°	20.2
60°	14.8
62.5°	11.1
65°	8.2



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CANDELA DISTRIBUTION (continued):

	0°
67.5°	6.4
70°	4.6
72.5°	3.7
75°	2.7
77.5°	1.8
80°	0.9
82.5°	0.9
85°	0.9
87.5°	0.0
90°	0.0

(END OF REPORT)