

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: P358687

Luminaire Tested: **HL36AR13SPD2WED010TL3PINMWWB**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P358687
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1908-462-5)
Test Lab: INNOVATION CENTER (G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO
Catalog Number: HL36AR13SPD2WED010TL3PINMWWB
Description: HL3 13W Round, Spot optic with pin-hole trim, No Lens, Matte White
Light Source: (1) 3100K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 961.9 lumens
Efficiency: N/A
Efficacy: 66.8 lumens/watt
Spacing Criteria (0/90/45): 0.28 / 0.28 / 0.28
Luminous Opening: Rectangular (W 0.17' x L: 0.17' x H: 0')
CIE Type: Direct

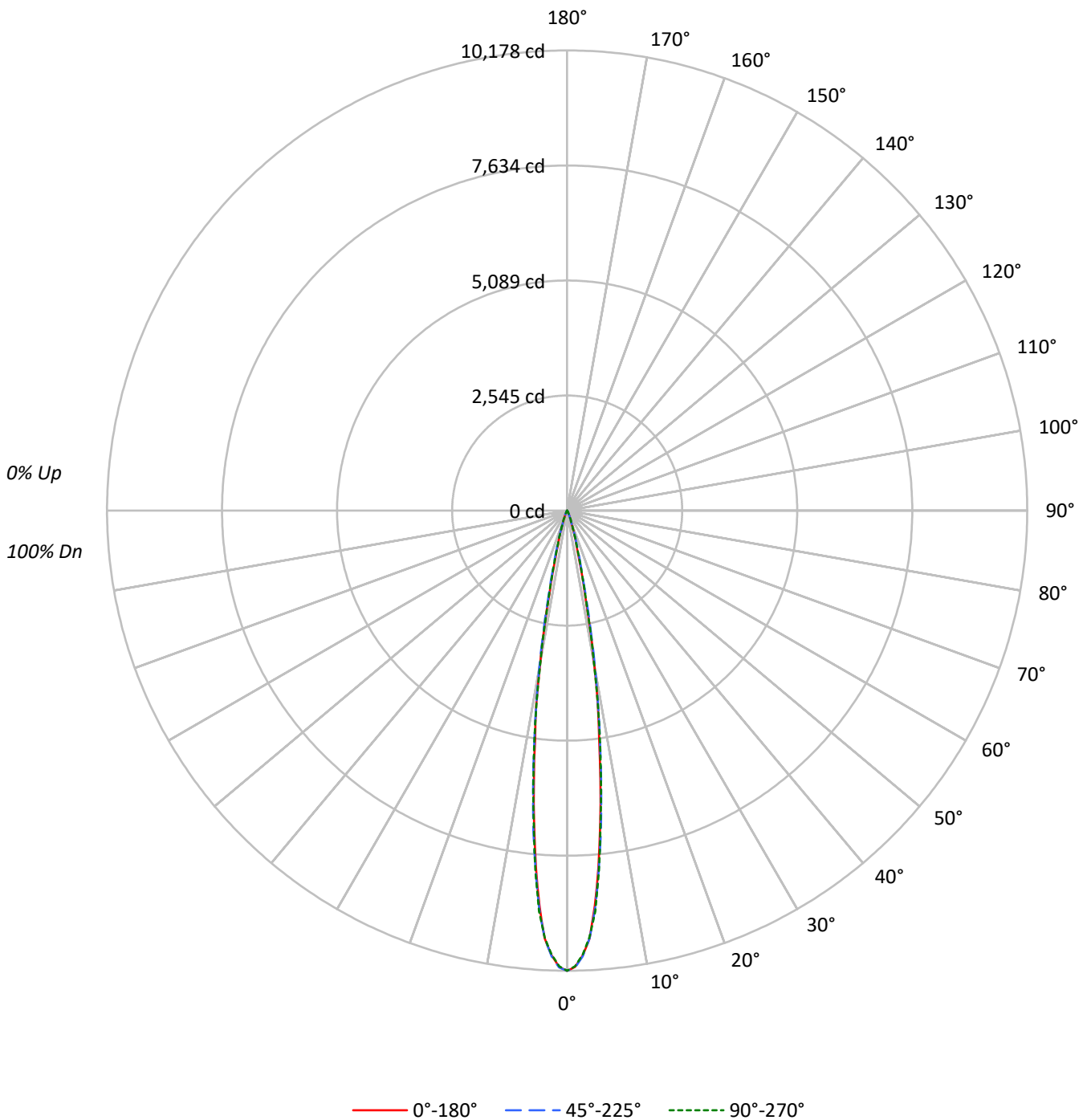
Input Watts (W): 14.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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							
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10				
RCR																								
0	119	119	119	119	116	116	116	116	111	111	111	111	106	106	106	106	102	102	102	102	100	100	100	100
1	116	114	112	111	113	112	111	109	108	107	106	106	104	104	103	103	101	100	100	100	98	98	98	98
2	113	110	108	106	111	108	106	104	105	104	102	102	103	101	100	100	100	99	98	98	97	97	97	97
3	110	107	104	102	109	105	103	101	103	101	99	99	101	99	98	98	99	97	96	96	95	95	95	95
4	108	104	101	98	107	103	100	98	101	99	97	97	99	97	96	96	98	96	95	95	94	94	94	94
5	106	102	98	96	105	101	98	96	99	97	95	95	98	96	94	94	97	95	93	93	92	92	92	92
6	104	99	96	94	103	99	96	94	98	95	93	93	96	94	93	93	95	93	92	92	91	91	91	91
7	102	98	94	92	101	97	94	92	96	93	92	92	95	93	91	91	94	92	91	91	90	90	90	90
8	101	96	93	91	100	95	93	90	95	92	90	90	94	92	90	90	93	91	90	90	89	89	89	89
9	99	94	91	89	98	94	91	89	93	91	89	89	93	90	89	89	92	90	88	88	88	88	88	88
10	98	93	90	88	97	93	90	88	92	89	88	88	91	89	88	88	91	89	87	87	87	87	87	87

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3944124	3944124	3944124
5°	3084063	3114326	3120822
10°	1360133	1414078	1350650
15°	325147	370841	338506
20°	96618	100453	102762
25°	31297	35658	32879
30°	7472	12439	7875
35°	2176	3075	2649
40°	455	961	455
45°	493	493	493
50°	543	543	543
55°	608	608	608
60°	697	697	697
65°	825	825	825
70°	1020	1020	1020
75°	1347	1347	1347
80°	2008	2008	2008
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	610.6	63.5
10°-20°	299.1	31.1
20°-30°	43.7	4.5
30°-40°	4.7	0.5
40°-50°	0.8	0.1
50°-60°	0.8	0.1
60°-70°	0.9	0.1
70°-80°	1.0	0.1
80°-90°	0.4	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°	953.4	99.1
0°-40°	958.1	99.6
0°-60°	959.7	99.8
0°-90°	961.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	961.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	10178	10178	10178	10178	10178	
5°	7929	8054	8006	8040	8023	604
15°	810	861	924	873	844	283
25°	73	82	83	86	77	39
35°	5	6	6	6	6	4
45°	1	1	1	1	1	1
55°	1	1	1	1	1	1
65°	1	1	1	1	1	1
75°	1	1	1	1	1	1
85°	0	0	0	0	0	0
90°	0	0	0	0	0	0



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	10178.4	10178.4	10178.4	10178.4	10178.4
1°	10096.9	10087.7	10108.0	10094.2	10080.3
2°	9845.0	9853.3	9865.4	9862.6	9828.3
3°	9476.4	9473.6	9468.9	9448.6	9450.4
4°	8766.9	8831.7	8834.5	8828.9	8884.5
5°	7928.6	8053.7	8006.4	8039.8	8023.1
6°	7004.2	7054.2	7129.3	7181.1	7042.2
7°	6051.1	6169.7	6175.2	6254.0	6160.4
8°	5095.2	5263.8	5265.7	5239.7	5237.0
9°	4359.8	4325.5	4360.7	4420.9	4325.5
10°	3456.7	3477.1	3593.8	3445.6	3432.6
11°	2662.0	2664.8	2788.0	2702.8	2628.7
12°	1900.6	2054.4	2121.1	2022.0	1985.9
13°	1417.1	1495.9	1592.2	1507.9	1512.5
14°	1049.4	1088.3	1213.4	1143.0	1138.3
15°	810.5	861.4	924.4	873.4	843.8
17.5°	409.4	457.6	457.6	471.5	443.7
20°	234.3	255.6	243.6	264.9	249.2
22.5°	138.0	150.1	148.2	152.8	145.4
25°	73.2	82.4	83.4	86.1	76.9
27.5°	25.0	39.8	48.2	39.8	27.8
30°	16.7	18.5	27.8	17.6	17.6
32.5°	10.2	11.1	13.0	11.1	10.2
35°	4.6	6.5	6.5	6.5	5.6
37.5°	1.9	2.8	3.7	3.7	2.8
40°	0.9	1.9	1.9	1.9	0.9
42.5°	0.9	0.9	0.9	0.9	0.9
45°	0.9	0.9	0.9	0.9	0.9
47.5°	0.9	0.9	0.9	0.9	0.9
50°	0.9	0.9	0.9	0.9	0.9
52.5°	0.9	0.9	0.9	0.9	0.9
55°	0.9	0.9	0.9	0.9	0.9
57.5°	0.9	0.9	0.9	0.9	0.9
60°	0.9	0.9	0.9	0.9	0.9
62.5°	0.9	0.9	0.9	0.9	0.9
65°	0.9	0.9	0.9	0.9	0.9
67.5°	0.9	0.9	0.9	0.9	0.9
70°	0.9	0.9	0.9	0.9	0.9
72.5°	0.9	0.9	0.9	0.9	0.9
75°	0.9	0.9	0.9	0.9	0.9
77.5°	0.9	0.9	0.9	0.9	0.9
80°	0.9	0.9	0.9	0.9	0.9
82.5°	0.9	0.9	0.9	0.9	0.9
85°	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)