

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: P358689

Luminaire Tested: **HL36AR13SPD2WED010TL3RMW**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P358689  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1908-462-1)  
Test Lab: INNOVATION CENTER (G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO  
Catalog Number: HL36AR13SPD2WED010TL3RMW  
Description: HL3 13W Round, Spot optic with conical 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: 1055.0 lumens  
Efficiency: N/A  
Efficacy: 73.3 lumens/watt  
Spacing Criteria (0/90/45): 0.28 / 0.28 / 0.28  
Luminous Opening: Rectangular (W 0.27' x L: 0.27' x H: 0')  
CIE Type: Direct

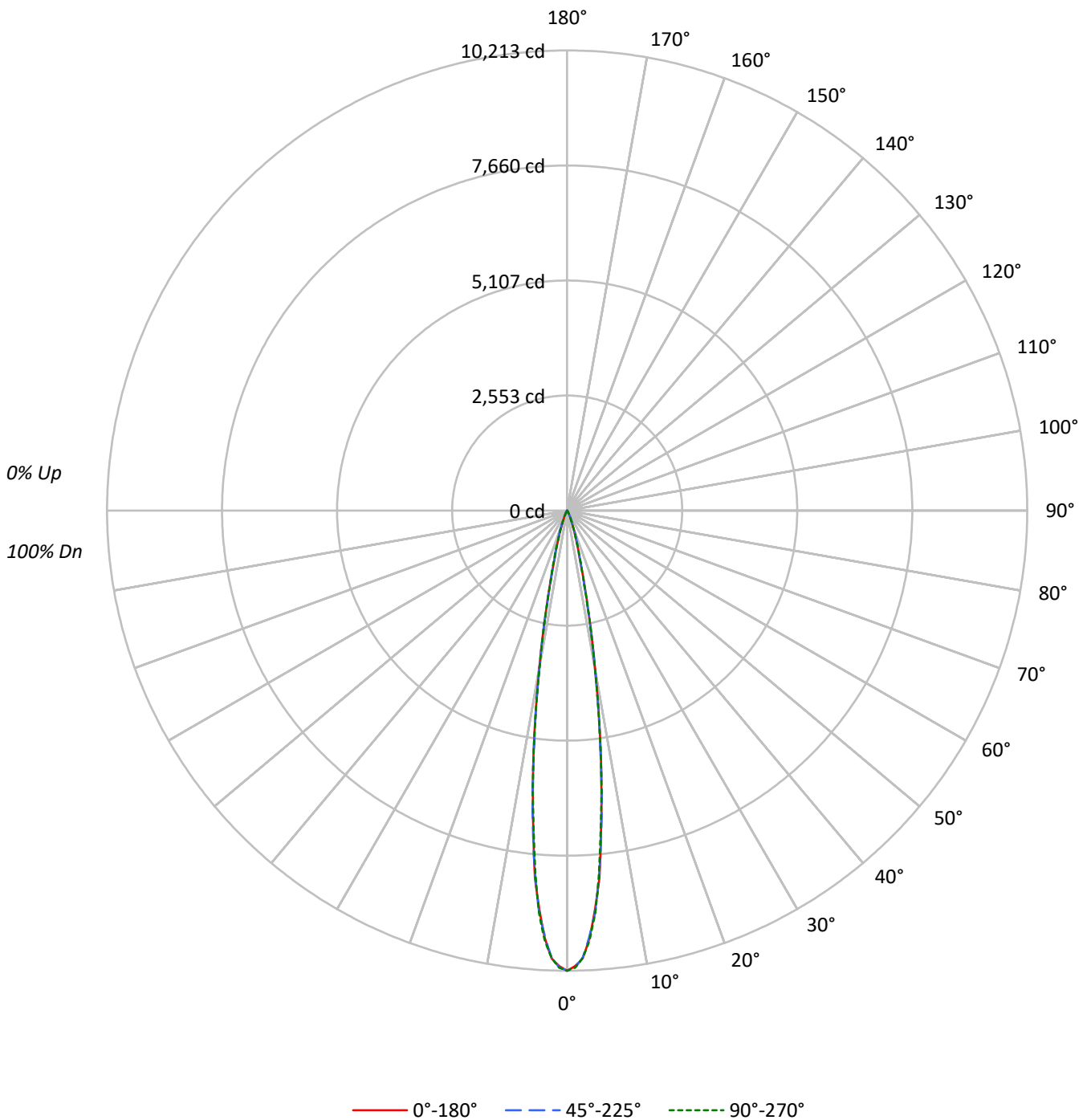
Input Watts (W): 14.4  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	116	114	112	111	113	112	110	109	108	107	106	104	103	103	101	100	100	98
2	113	110	107	105	111	108	106	104	105	103	102	102	101	100	100	99	98	96
3	110	106	103	101	108	105	102	100	103	100	99	100	99	97	98	97	96	94
4	108	103	100	98	106	102	99	97	100	98	96	99	97	95	97	95	94	93
5	105	101	97	95	104	100	97	94	98	96	94	97	95	93	96	94	92	91
6	103	98	95	93	102	98	95	92	96	94	92	95	93	91	94	92	91	90
7	101	96	93	91	100	96	93	90	95	92	90	94	91	90	93	91	89	88
8	99	94	91	89	99	94	91	89	93	90	88	92	90	88	92	89	88	87
9	98	93	89	87	97	92	89	87	92	89	87	91	88	87	90	88	86	86
10	96	91	88	86	96	91	88	86	90	87	86	90	87	85	89	87	85	85

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	1498676	1498676	1498676
5°	1205397	1196809	1194202
10°	529358	532949	526736
15°	156146	163059	166720
20°	55719	65417	56157
25°	19964	24919	19802
30°	7693	8794	7693
35°	2150	4317	2150
40°	709	1590	709
45°	187	581	187
50°	205	205	0
55°	0	0	0
60°	0	0	0
65°	0	0	0
70°	0	0	0
75°	0	0	0
80°	0	0	0
85°	0	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	619.2	58.7
10°-20°	349.2	33.1
20°-30°	72.2	6.8
30°-40°	12.8	1.2
40°-50°	1.6	0.2
50°-60°	0.1	0.0
60°-70°	0.0	0.0
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°	1040.5	98.6
0°-40°	1053.3	99.8
0°-60°	1055.0	100.0
0°-90°	1055.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1055.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	10213	10213	10213	10213	10213	
5°	8183	8144	8125	8146	8107	619
15°	1028	1058	1073	1090	1097	344
25°	123	132	154	132	122	66
35°	12	17	24	17	12	10
45°	1	2	3	2	1	1
55°	0	0	0	0	0	0
65°	0	0	0	0	0	0
75°	0	0	0	0	0	0
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°	10212.7	10212.7	10212.7	10212.7	10212.7
1°	10110.7	10124.6	10136.7	10146.0	10145.0
2°	9946.7	9910.5	9926.3	9931.9	9936.5
3°	9489.8	9466.6	9467.5	9478.6	9545.4
4°	8867.9	8906.8	8929.0	8893.8	8952.2
5°	8182.9	8144.0	8124.6	8145.9	8106.9
6°	7194.9	7279.3	7249.6	7209.8	7118.0
7°	6240.3	6337.6	6300.6	6318.2	6276.5
8°	5345.0	5317.2	5273.6	5293.1	5294.0
9°	4440.4	4459.0	4435.8	4421.9	4385.7
10°	3552.5	3683.2	3576.6	3586.8	3534.9
11°	2841.6	2819.4	2859.3	2835.2	2821.3
12°	2206.8	2261.5	2186.4	2133.6	2242.0
13°	1772.1	1709.1	1689.6	1717.4	1697.0
14°	1335.6	1353.2	1336.5	1372.6	1367.1
15°	1027.8	1057.5	1073.3	1089.9	1097.4
17.5°	610.8	634.9	668.2	643.2	624.7
20°	356.8	374.4	418.9	384.6	359.6
22.5°	204.8	220.6	264.1	222.4	209.5
25°	123.3	132.5	153.9	132.5	122.3
27.5°	73.2	80.6	85.3	80.6	76.0
30°	45.4	50.0	51.9	51.0	45.4
32.5°	26.0	30.6	34.3	30.6	26.0
35°	12.0	16.7	24.1	16.7	12.0
37.5°	6.5	8.3	14.8	8.3	7.4
40°	3.7	4.6	8.3	4.6	3.7
42.5°	1.9	2.8	3.7	2.8	1.9
45°	0.9	1.9	2.8	1.9	0.9
47.5°	0.9	0.9	1.9	0.9	0.9
50°	0.9	0.0	0.9	0.0	0.0
52.5°	0.0	0.0	0.9	0.0	0.0
55°	0.0	0.0	0.0	0.0	0.0
57.5°	0.0	0.0	0.0	0.0	0.0
60°	0.0	0.0	0.0	0.0	0.0
62.5°	0.0	0.0	0.0	0.0	0.0
65°	0.0	0.0	0.0	0.0	0.0
67.5°	0.0	0.0	0.0	0.0	0.0
70°	0.0	0.0	0.0	0.0	0.0
72.5°	0.0	0.0	0.0	0.0	0.0
75°	0.0	0.0	0.0	0.0	0.0
77.5°	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0
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)