

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: P358656

Luminaire Tested: **HL36SAR13FLD2WED010TLS3R2GMW**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P358656  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1908-462-19)  
Test Lab: INNOVATION CENTER (G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO  
Catalog Number: HL36SAR13FLD2WED010TLS3R2GMW  
Description: HL3 13W Square, Flood optic with reflector trim, Lensed, Matte White  
Light Source: (1) 3100K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1028.0 lumens  
Efficiency: N/A  
Efficacy: 71.4 lumens/watt  
Spacing Criteria (0/90/45): 0.62 / 0.63 / 0.6  
Luminous Opening: Rectangular (W 0.27' x L: 0.27' x H: 0')  
CIE Type: Direct

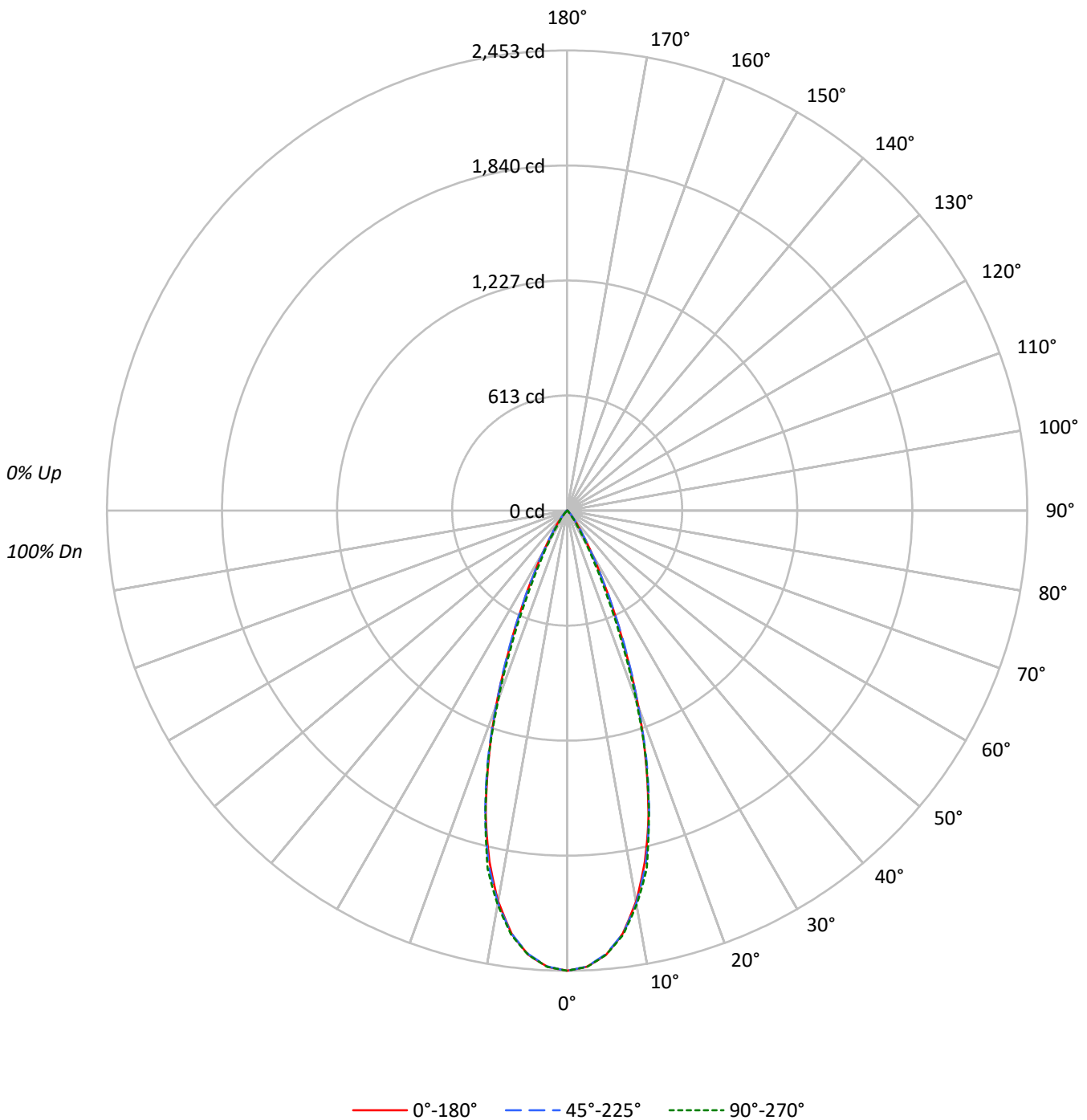
Input Watts (W): 14.4  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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	114	112	110	108	112	110	108	106	106	105	103	102	101	100	99	98	97	96				
2	110	106	103	100	108	104	101	99	101	99	97	98	96	95	96	94	93	91				
3	106	101	97	93	104	99	96	93	97	94	91	94	92	90	92	90	88	87				
4	102	96	91	88	100	95	91	87	93	89	86	91	88	85	89	87	84	83				
5	98	91	87	83	97	91	86	83	89	85	82	87	84	82	86	83	81	80				
6	95	87	83	79	93	87	82	79	85	81	78	84	81	78	83	80	77	76				
7	91	84	79	76	90	83	79	75	82	78	75	81	77	75	80	77	74	73				
8	88	80	76	72	87	80	75	72	79	75	72	78	74	72	77	74	71	70				
9	85	77	73	69	84	77	72	69	76	72	69	75	72	69	74	71	69	68				
10	82	74	70	67	81	74	70	67	73	69	66	73	69	66	72	69	66	65				

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

	0°	45°	90°
0°	359969	359969	359969
5°	350148	349471	350148
10°	315276	316512	317764
15°	254729	256552	255717
20°	173014	172733	167955
25°	93588	94203	82189
30°	43480	42701	33754
35°	18756	18595	13113
40°	7624	8333	4961
45°	3071	3653	1723
50°	1484	1689	845
55°	947	947	716
60°	822	822	558
65°	660	660	660
70°	815	386	386
75°	510	510	510
80°	0	0	0
85°	0	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	218.9	21.3
10°-20°	455.1	44.3
20°-30°	267.6	26.0
30°-40°	67.6	6.6
40°-50°	12.9	1.3
50°-60°	3.2	0.3
60°-70°	1.9	0.2
70°-80°	0.8	0.1
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°	941.6	91.6
0°-40°	1009.2	98.2
0°-60°	1025.2	99.7
0°-90°	1028.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1028.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2453	2453	2453	2453	2453	
5°	2377	2372	2372	2377	2377	219
15°	1677	1682	1689	1690	1683	453
25°	578	587	582	540	508	274
35°	105	108	104	82	73	73
45°	15	16	18	12	8	13
55°	4	4	4	3	3	4
65°	2	2	2	2	2	2
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°	2453.0	2453.0	2453.0	2453.0	2453.0
2.5°	2433.5	2434.5	2432.6	2434.5	2434.5
5°	2377.0	2371.5	2372.4	2377.0	2377.0
7.5°	2274.2	2274.2	2274.2	2279.8	2281.6
10°	2115.8	2118.6	2124.1	2135.3	2132.5
12.5°	1915.7	1922.2	1932.4	1940.7	1956.5
15°	1676.7	1682.3	1688.7	1689.7	1683.2
17.5°	1391.4	1403.4	1408.1	1404.4	1399.7
20°	1107.9	1107.9	1106.1	1089.4	1075.5
22.5°	817.0	834.6	833.7	796.7	767.0
25°	578.0	587.3	581.8	540.1	507.6
27.5°	387.2	397.4	386.3	340.9	315.9
30°	256.6	259.4	252.0	213.1	199.2
32.5°	164.9	169.5	164.0	133.4	120.4
35°	104.7	107.5	103.8	82.4	73.2
37.5°	64.8	67.6	67.6	50.9	43.5
40°	39.8	41.7	43.5	31.5	25.9
42.5°	24.1	25.9	28.7	19.5	14.8
45°	14.8	15.7	17.6	12.0	8.3
47.5°	9.3	10.2	11.1	6.5	5.6
50°	6.5	6.5	7.4	4.6	3.7
52.5°	4.6	4.6	4.6	3.7	2.8
55°	3.7	3.7	3.7	2.8	2.8
57.5°	2.8	2.8	2.8	2.8	1.9
60°	2.8	2.8	2.8	1.9	1.9
62.5°	2.8	2.8	2.8	1.9	1.9
65°	1.9	1.9	1.9	1.9	1.9
67.5°	1.9	1.9	1.9	1.9	0.9
70°	1.9	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	0.0
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
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)