

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: P358688

Luminaire Tested: **HL36SAR13SPD2WED010TLS3R2GMW**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P358688
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1908-462-3)
Test Lab: INNOVATION CENTER (G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO
Catalog Number: HL36SAR13SPD2WED010TLS3R2GMW
Description: HL3 13W Square, Spot 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: 986.0 lumens
Efficiency: N/A
Efficacy: 68.5 lumens/watt
Spacing Criteria (0/90/45): 0.3 / 0.33 / 0.32
Luminous Opening: Rectangular (W 0.27' x L: 0.27' x H: 0')
CIE Type: Direct

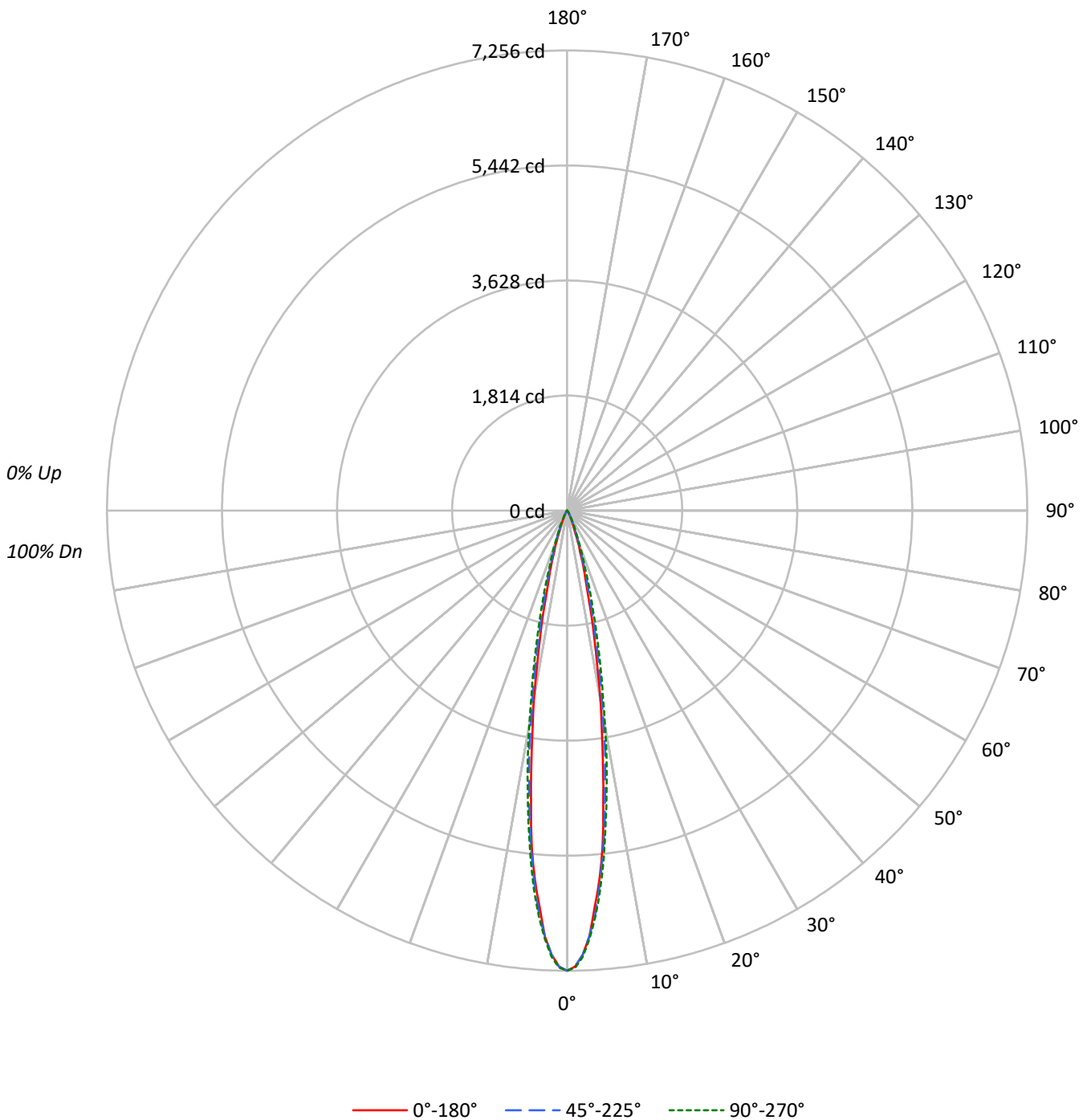
Input Watts (W): 14.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	100	100	
1	115	113	112	110	113	111	110	108	107	106	105	104	103	102	100	100	99	97	97	97	97	
2	112	109	106	104	110	107	105	103	104	102	100	101	100	98	99	97	96	95	95	95	95	
3	109	105	102	99	107	104	101	98	101	99	97	99	97	95	97	95	94	93	93	93	93	
4	106	101	98	95	105	100	97	95	98	96	94	97	94	92	95	93	92	90	90	90	90	
5	104	98	95	92	102	97	94	92	96	93	91	94	92	90	93	91	89	88	88	88	88	
6	101	96	92	89	100	95	91	89	94	91	88	92	90	88	91	89	87	86	86	86	86	
7	99	93	89	87	98	93	89	87	92	88	86	91	88	86	90	87	85	85	85	85	85	
8	97	91	87	85	96	90	87	85	90	86	84	89	86	84	88	86	84	83	83	83	83	
9	95	89	85	83	94	88	85	83	88	85	82	87	84	82	86	84	82	81	81	81	81	
10	93	87	83	81	92	87	83	81	86	83	81	85	83	81	85	82	80	80	80	80	80	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1064762	1064762	1064762
5°	860537	870097	883075
10°	449891	477249	513027
15°	167632	197363	229054
20°	62559	76739	87468
25°	24628	31234	33177
30°	9896	13047	13505
35°	3816	6145	5482
40°	1590	2835	2318
45°	768	1349	1162
50°	434	639	639
55°	486	486	486
60°	264	558	558
65°	313	313	313
70°	386	386	386
75°	0	0	0
80°	0	0	0
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	474.1	48.1
10°-20°	386.5	39.2
20°-30°	96.3	9.8
30°-40°	21.1	2.1
40°-50°	4.7	0.5
50°-60°	1.8	0.2
60°-70°	1.1	0.1
70°-80°	0.4	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°	956.8	97.0
0°-40°	978.0	99.2
0°-60°	984.5	99.8
0°-90°	986.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	986.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7256	7256	7256	7256	7256	
5°	5842	5838	5907	5995	5995	459
15°	1103	1174	1299	1453	1508	337
25°	152	161	193	202	205	79
35°	21	26	34	33	31	16
45°	4	5	6	6	6	3
55°	2	2	2	2	2	1
65°	1	1	1	1	1	1
75°	0	0	0	1	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°	7255.8	7255.8	7255.8	7255.8	7255.8
1°	7192.8	7196.5	7191.9	7199.3	7209.5
2°	7007.3	7014.8	7009.2	7028.7	7040.7
3°	6725.4	6715.2	6717.1	6753.3	6754.2
4°	6258.1	6356.4	6376.8	6451.9	6405.5
5°	5841.8	5838.1	5906.7	5994.8	5994.8
6°	5346.6	5302.1	5409.7	5559.9	5510.7
7°	4680.8	4726.3	4881.1	4986.8	4985.9
8°	4067.0	4141.2	4291.4	4422.1	4465.7
9°	3474.5	3620.0	3813.8	3877.8	3981.7
10°	3019.2	3052.6	3202.8	3392.9	3442.9
11°	2466.5	2601.0	2763.2	2861.5	2949.6
12°	2054.8	2161.5	2300.5	2479.5	2551.8
13°	1696.0	1723.8	1913.9	2096.5	2152.2
14°	1352.9	1428.9	1580.1	1725.6	1793.3
15°	1103.4	1173.9	1299.1	1453.0	1507.7
17.5°	671.3	717.7	791.9	890.2	915.2
20°	400.6	434.0	491.4	539.7	560.1
22.5°	243.9	262.4	304.1	334.7	341.2
25°	152.1	161.3	192.9	202.1	204.9
27.5°	93.7	102.0	122.4	128.0	129.8
30°	58.4	64.9	77.0	82.5	79.7
32.5°	36.2	41.7	51.0	54.7	50.1
35°	21.3	26.0	34.3	33.4	30.6
37.5°	13.0	15.8	22.3	21.3	19.5
40°	8.3	10.2	14.8	13.9	12.1
42.5°	5.6	6.5	9.3	9.3	8.3
45°	3.7	4.6	6.5	6.5	5.6
47.5°	2.8	2.8	4.6	4.6	3.7
50°	1.9	1.9	2.8	2.8	2.8
52.5°	1.9	1.9	2.8	2.8	2.8
55°	1.9	1.9	1.9	1.9	1.9
57.5°	0.9	1.9	1.9	1.9	1.9
60°	0.9	0.9	1.9	1.9	1.9
62.5°	0.9	0.9	1.9	1.9	1.9
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°	0.0	0.0	0.0	0.9	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)