

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 COMMERCIAL

Report Number: P580898

Luminaire Tested: **HC450D010-HM44560840-41RWWC**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P580898
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-14)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 9/9/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HC450D010-HM44560840-41RWWC
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, SPECULAR TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5527.5 lumens
Efficiency: N/A
Efficacy: 115.2 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.15 / 1.21
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

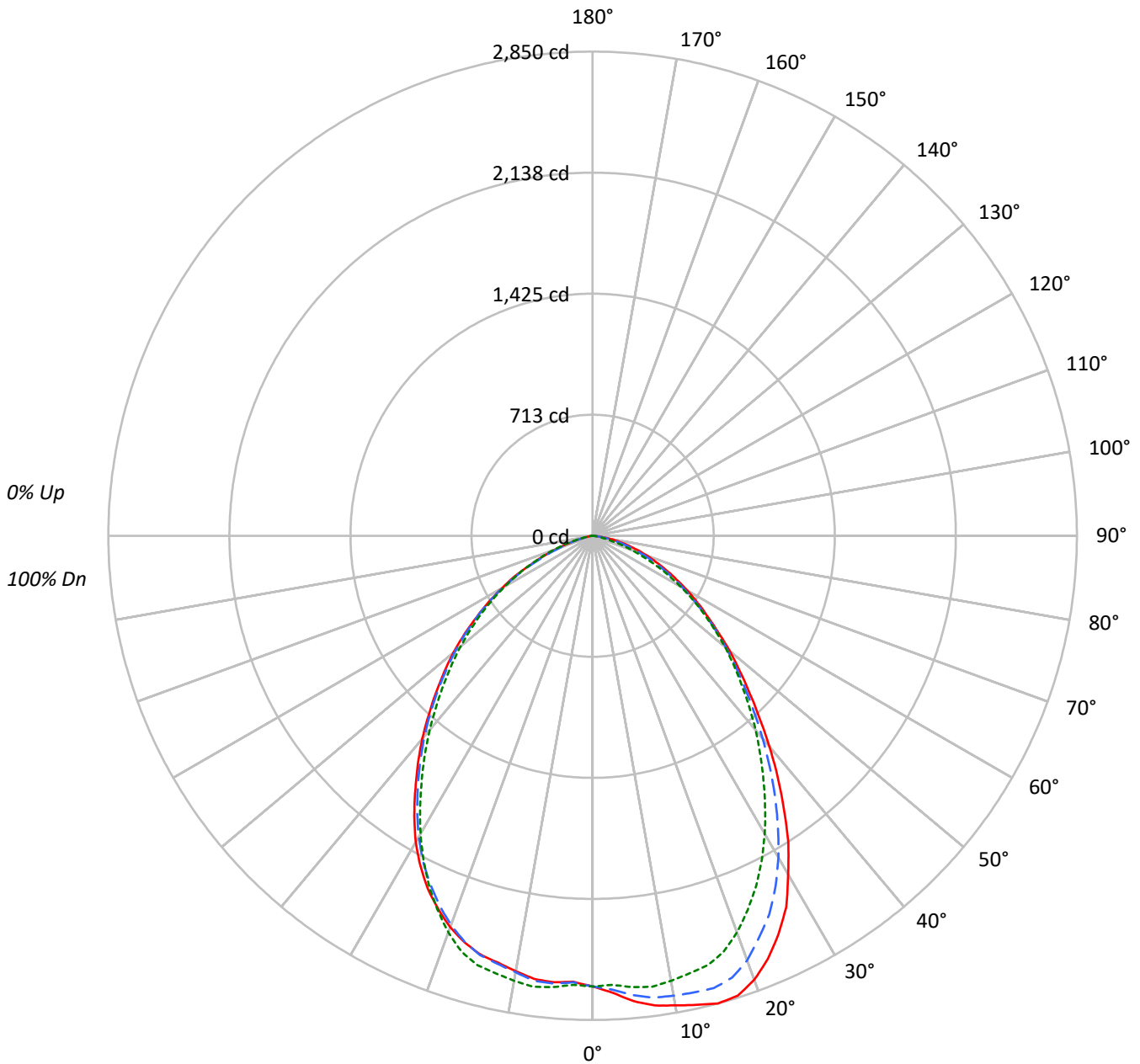
Input Watts (W): 48
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	111	107	103	100	108	105	102	99	101	98	96	97	95	93	93	92	90	88	88	88	88
2	102	95	90	85	100	94	88	84	90	86	82	87	83	80	84	81	78	76	76	76	76
3	95	85	78	73	92	84	77	72	81	75	71	78	74	70	76	72	69	67	67	67	67
4	87	77	69	63	85	76	68	63	73	67	62	71	66	61	69	64	60	58	58	58	58
5	81	70	61	56	79	68	61	55	66	60	55	65	59	54	63	58	54	52	52	52	52
6	75	63	55	49	74	62	55	49	61	54	49	59	53	48	58	52	48	46	46	46	46
7	70	58	50	44	69	57	49	44	56	49	44	54	48	44	53	47	43	41	41	41	41
8	66	53	45	40	64	53	45	40	51	44	40	50	44	39	49	43	39	37	37	37	37
9	62	49	42	36	60	49	41	36	47	41	36	46	40	36	45	40	36	34	34	34	34
10	58	46	38	33	57	45	38	33	44	38	33	43	37	33	42	37	33	31	31	31	31

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	327174	327174	327174
5°	340409	330207	326653
10°	351535	333123	325934
15°	363885	334131	325908
20°	365117	326054	321827
25°	352205	309770	312206
30°	327754	288458	296619
35°	295237	263932	273659
40°	260299	240091	251057
45°	227588	216354	226978
50°	201525	194674	204960
55°	177284	171908	178833
60°	158277	146781	151197
65°	139159	119254	117182
70°	121535	87924	80170
75°	100747	52947	42748
80°	76359	20386	12715
85°	35522	4953	4953



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	255.8	4.6
10°-20°	746.6	13.5
20°-30°	1081.3	19.6
30°-40°	1140.8	20.6
40°-50°	987.3	17.9
50°-60°	731.4	13.2
60°-70°	421.6	7.6
70°-80°	147.2	2.7
80°-90°	15.5	0.3
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°	2083.7	37.7
0°-40°	3224.5	58.3
0°-60°	4943.2	89.4
0°-90°	5527.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5527.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2652	2652	2652	2652	2652	
5°	2749	2714	2667	2645	2638	264
15°	2850	2756	2617	2556	2552	801
25°	2588	2459	2276	2262	2294	1184
35°	1961	1871	1753	1792	1817	1225
45°	1305	1269	1240	1287	1301	1013
55°	824	807	799	828	832	743
65°	477	448	409	387	402	476
75°	211	179	111	90	90	228
85°	25	14	4	4	4	39
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	2652.5	2652.5	2652.5	2652.5	2652.5	2652.5	2652.5	2652.5	2652.5
2.5°	2691.9	2684.8	2674.1	2659.7	2645.4	2634.5	2631.0	2627.5	2627.5
5°	2749.3	2735.0	2713.5	2684.8	2666.9	2656.1	2645.4	2638.2	2638.2
7.5°	2788.8	2774.4	2742.1	2702.7	2677.6	2656.1	2641.7	2631.0	2631.0
10°	2806.7	2788.8	2749.3	2699.1	2659.7	2631.0	2609.5	2602.3	2602.3
12.5°	2828.2	2806.7	2752.9	2688.3	2638.2	2602.3	2580.9	2573.7	2573.7
15°	2849.6	2824.6	2756.4	2681.2	2616.6	2573.7	2555.7	2552.2	2552.2
17.5°	2838.9	2806.7	2727.8	2638.2	2566.5	2523.5	2505.6	2505.6	2509.1
20°	2781.6	2749.3	2659.7	2559.3	2484.0	2451.8	2437.4	2444.6	2451.8
22.5°	2695.5	2656.1	2559.3	2462.5	2383.7	2355.0	2355.0	2365.8	2376.5
25°	2587.9	2552.2	2459.0	2351.4	2276.1	2254.6	2261.8	2279.8	2294.0
27.5°	2466.2	2426.7	2329.9	2229.5	2154.2	2143.5	2161.4	2186.5	2193.7
30°	2301.2	2269.0	2186.5	2089.8	2025.3	2021.6	2046.7	2064.7	2082.6
32.5°	2143.5	2107.7	2028.8	1935.6	1889.0	1892.6	1921.3	1942.8	1953.5
35°	1960.7	1928.4	1871.1	1795.8	1752.8	1760.0	1792.2	1813.7	1817.4
37.5°	1788.7	1767.1	1709.8	1652.4	1620.2	1634.5	1663.2	1688.3	1688.3
40°	1616.6	1598.7	1555.7	1509.1	1491.1	1509.1	1537.7	1559.2	1559.2
42.5°	1451.7	1441.0	1405.1	1372.9	1362.1	1387.2	1412.3	1430.2	1426.6
45°	1304.7	1294.0	1269.0	1243.8	1240.3	1265.3	1286.8	1297.6	1301.2
47.5°	1172.1	1165.0	1143.4	1125.5	1125.5	1150.6	1168.5	1179.3	1182.8
50°	1050.2	1043.1	1025.2	1010.8	1014.5	1039.5	1053.9	1064.6	1068.1
52.5°	928.3	924.8	910.5	892.6	903.3	921.2	939.2	946.3	949.9
55°	824.4	824.4	806.6	792.2	799.4	817.3	828.0	831.6	831.6
57.5°	731.3	727.6	706.2	691.8	695.4	713.4	720.4	724.1	724.1
60°	641.6	638.1	616.5	595.0	595.0	605.8	609.4	612.9	612.9
62.5°	555.6	552.1	526.9	509.0	501.8	498.3	498.3	505.5	519.7
65°	476.8	473.1	448.1	419.3	408.6	397.9	387.1	394.3	401.5
67.5°	405.1	397.9	372.8	347.7	322.6	304.6	286.7	297.6	311.8
70°	337.0	329.8	301.1	272.4	243.8	215.1	200.7	215.1	222.3
72.5°	272.4	265.2	236.6	207.9	172.0	143.4	139.8	143.4	147.0
75°	211.4	207.9	179.2	147.0	111.1	89.7	89.7	89.7	89.7
77.5°	157.7	150.6	121.9	93.2	64.5	50.1	46.6	46.6	46.6
80°	107.5	100.4	75.3	53.8	28.7	21.5	21.5	17.9	17.9
82.5°	60.9	57.3	39.4	21.5	10.7	7.2	7.2	7.2	7.2
85°	25.1	21.5	14.4	7.2	3.5	3.5	3.5	3.5	3.5
87.5°	3.5	3.5	3.5	0.0	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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— 0°-180° - - 45°-225° - - - - 90°-270°







(END OF REPORT)