

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: P580739

Luminaire Tested: **HC445D010-HM44560835-41WWW**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P580739
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-16)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 9/9/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HC445D010-HM44560835-41WWW
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4518.2 lumens
Efficiency: N/A
Efficacy: 102.7 lumens/watt
Spacing Criteria (0/90/45): 1.06 / 1.03 / 1.1
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

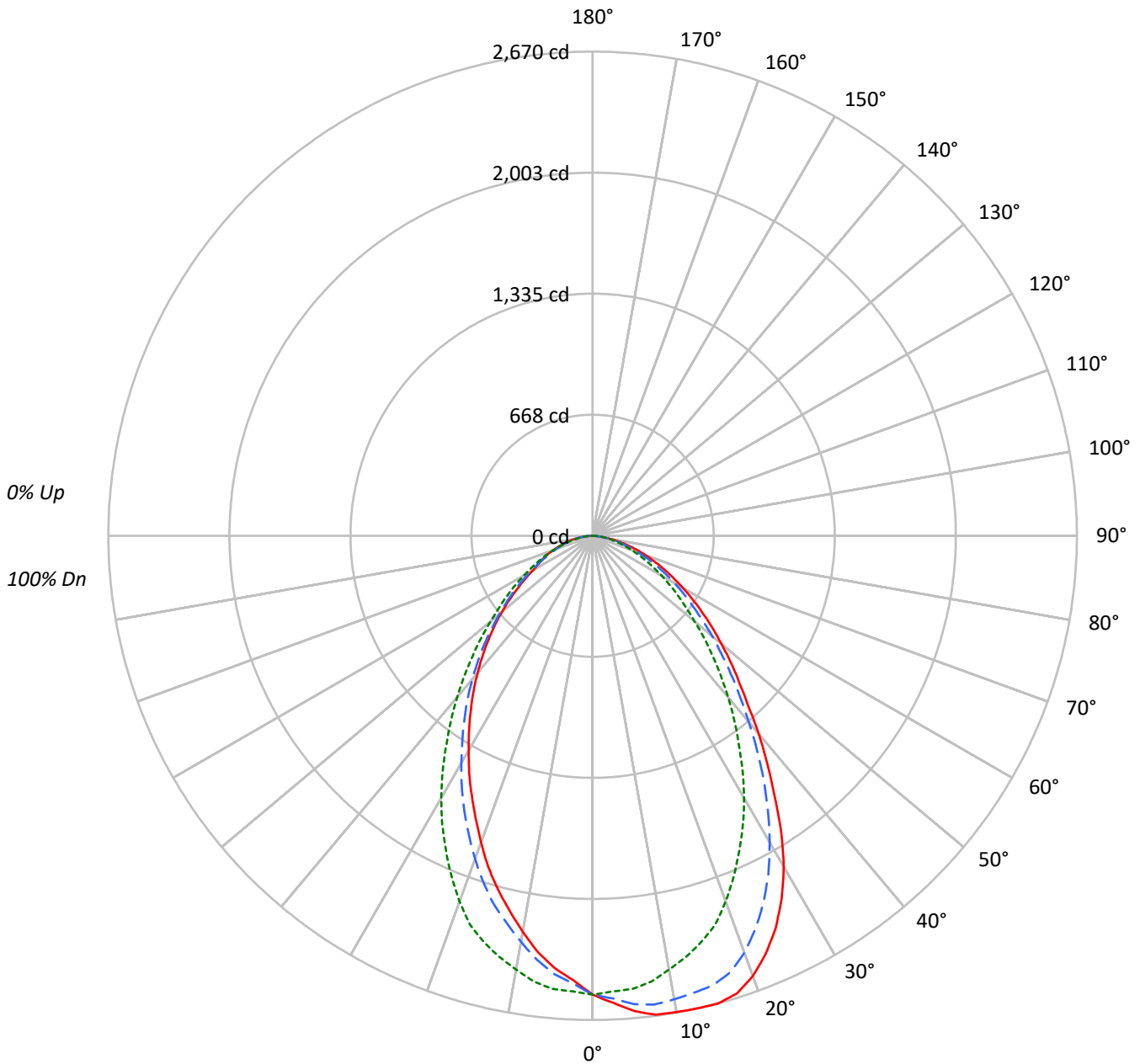
Input Watts (W): 44
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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								
1	111	106	103	100	108	104	101	98	100	97	95	96	94	92	93	91	89	87								
2	102	95	89	84	100	93	88	83	90	85	81	87	83	80	84	81	78	76								
3	94	85	78	72	92	84	77	72	81	75	71	78	73	69	76	72	68	66								
4	87	77	69	63	85	76	68	63	73	67	62	71	66	61	69	64	60	58								
5	81	70	62	56	79	69	61	56	67	60	55	65	59	54	63	58	54	52								
6	76	64	56	50	74	63	55	50	61	54	49	59	53	49	58	53	48	47								
7	71	58	50	45	69	58	50	45	56	49	44	55	49	44	53	48	44	42								
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38								
9	62	50	42	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35								
10	59	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32								

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	312077	312077	312077
5°	325799	310681	296306
10°	334038	304216	277738
15°	340938	296091	257705
20°	339128	281688	235982
25°	324890	260476	214693
30°	300137	237839	194598
35°	263088	211561	176145
40°	229094	186908	158633
45°	199382	163029	141748
50°	177615	140503	125094
55°	158747	123544	108168
60°	141724	107952	93249
65°	125967	94709	88609
70°	110536	81576	82658
75°	93646	69532	76633
80°	71884	59241	69753
85°	42032	46420	58874



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	237.2	5.2
10°-20°	654.2	14.5
20°-30°	893.7	19.8
30°-40°	897.4	19.9
40°-50°	742.4	16.4
50°-60°	538.0	11.9
60°-70°	340.8	7.5
70°-80°	172.3	3.8
80°-90°	42.2	0.9
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°	1785.1	39.5
0°-40°	2682.5	59.4
0°-60°	3962.9	87.7
0°-90°	4518.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4518.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2530	2530	2530	2530	2530	
5°	2631	2593	2509	2426	2393	252
15°	2670	2566	2319	2104	2018	751
25°	2387	2229	1914	1673	1578	1091
35°	1747	1643	1405	1232	1170	1095
45°	1143	1078	935	842	813	889
55°	738	673	574	524	503	664
65°	432	384	324	292	304	430
75°	196	170	146	152	161	210
85°	30	30	33	39	42	41
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°	2530.1	2530.1	2530.1	2530.1	2530.1	2530.1	2530.1	2530.1	2530.1
2.5°	2577.7	2568.7	2553.9	2536.1	2515.2	2491.4	2470.5	2458.6	2452.7
5°	2631.3	2619.3	2592.6	2553.9	2509.2	2464.6	2425.9	2402.1	2393.1
7.5°	2664.0	2646.1	2607.4	2547.9	2479.5	2414.0	2357.4	2324.7	2315.7
10°	2667.0	2646.1	2595.5	2515.2	2428.9	2342.5	2274.1	2226.5	2217.5
12.5°	2669.9	2643.2	2580.7	2485.5	2378.3	2271.2	2187.8	2131.2	2116.3
15°	2669.9	2643.2	2565.8	2452.7	2318.7	2196.7	2104.4	2038.9	2018.1
17.5°	2646.1	2616.4	2524.1	2393.1	2247.3	2110.4	2003.2	1934.8	1913.9
20°	2583.6	2550.9	2446.7	2303.8	2146.0	2003.2	1896.1	1824.6	1797.8
22.5°	2494.3	2455.6	2345.5	2190.7	2033.0	1887.1	1783.0	1708.6	1684.7
25°	2387.2	2348.5	2229.4	2077.6	1913.9	1777.0	1672.8	1604.3	1577.5
27.5°	2256.2	2214.5	2098.5	1946.7	1794.9	1658.0	1562.7	1500.2	1473.4
30°	2107.3	2062.8	1952.6	1806.8	1669.9	1538.8	1446.6	1396.0	1366.3
32.5°	1934.8	1896.1	1797.8	1666.8	1538.8	1413.8	1336.4	1291.9	1268.0
35°	1747.2	1726.4	1643.1	1530.0	1405.0	1300.7	1232.3	1190.7	1169.8
37.5°	1580.6	1559.7	1488.2	1393.1	1282.9	1187.6	1131.1	1095.4	1077.5
40°	1422.8	1405.0	1336.4	1256.1	1160.8	1077.5	1029.9	1003.1	985.2
42.5°	1268.0	1259.1	1202.6	1128.1	1044.8	973.3	934.6	913.8	898.9
45°	1143.0	1131.1	1077.5	1006.1	934.6	875.0	842.4	827.5	812.6
47.5°	1032.9	1018.0	961.4	898.9	833.4	779.9	750.1	735.2	729.3
50°	925.6	910.8	860.2	797.7	732.2	693.5	669.7	654.8	651.9
52.5°	830.5	815.6	759.0	699.5	648.9	616.1	595.3	580.4	574.5
55°	738.2	720.3	672.8	616.1	574.5	544.7	523.9	508.9	503.0
57.5°	654.8	637.0	595.3	541.7	503.0	476.3	458.3	443.5	437.6
60°	574.5	559.5	520.9	470.3	437.6	413.8	395.8	383.9	378.0
62.5°	500.1	488.2	449.5	404.8	378.0	357.1	342.3	330.4	336.4
65°	431.6	419.7	383.9	345.2	324.5	303.6	291.7	291.7	303.6
67.5°	366.1	354.2	324.5	291.7	273.9	259.0	250.0	259.0	267.9
70°	306.5	294.6	267.9	241.1	226.2	214.3	214.3	223.3	229.2
72.5°	250.0	238.1	217.3	196.5	184.6	175.6	184.6	190.5	196.5
75°	196.5	187.5	169.6	154.8	145.9	142.8	151.8	157.8	160.8
77.5°	145.9	139.9	128.0	116.1	110.2	113.1	122.1	125.0	128.0
80°	101.2	98.2	89.3	83.4	83.4	86.3	92.2	95.3	98.2
82.5°	62.5	62.5	56.5	53.6	56.5	62.5	65.5	68.4	68.4
85°	29.7	32.8	29.7	29.7	32.8	38.7	38.7	41.6	41.6
87.5°	9.0	9.0	11.9	11.9	14.9	14.9	14.9	14.9	17.8
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)