

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: P592853

Luminaire Tested: **HC445D010-HM44560850-41WWWB**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P592853
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-18)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 9/9/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HC445D010-HM44560850-41WWWB
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, BLACK BAFFLE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 5000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5127.0 lumens
Efficiency: N/A
Efficacy: 116.5 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.07 / 1.15
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

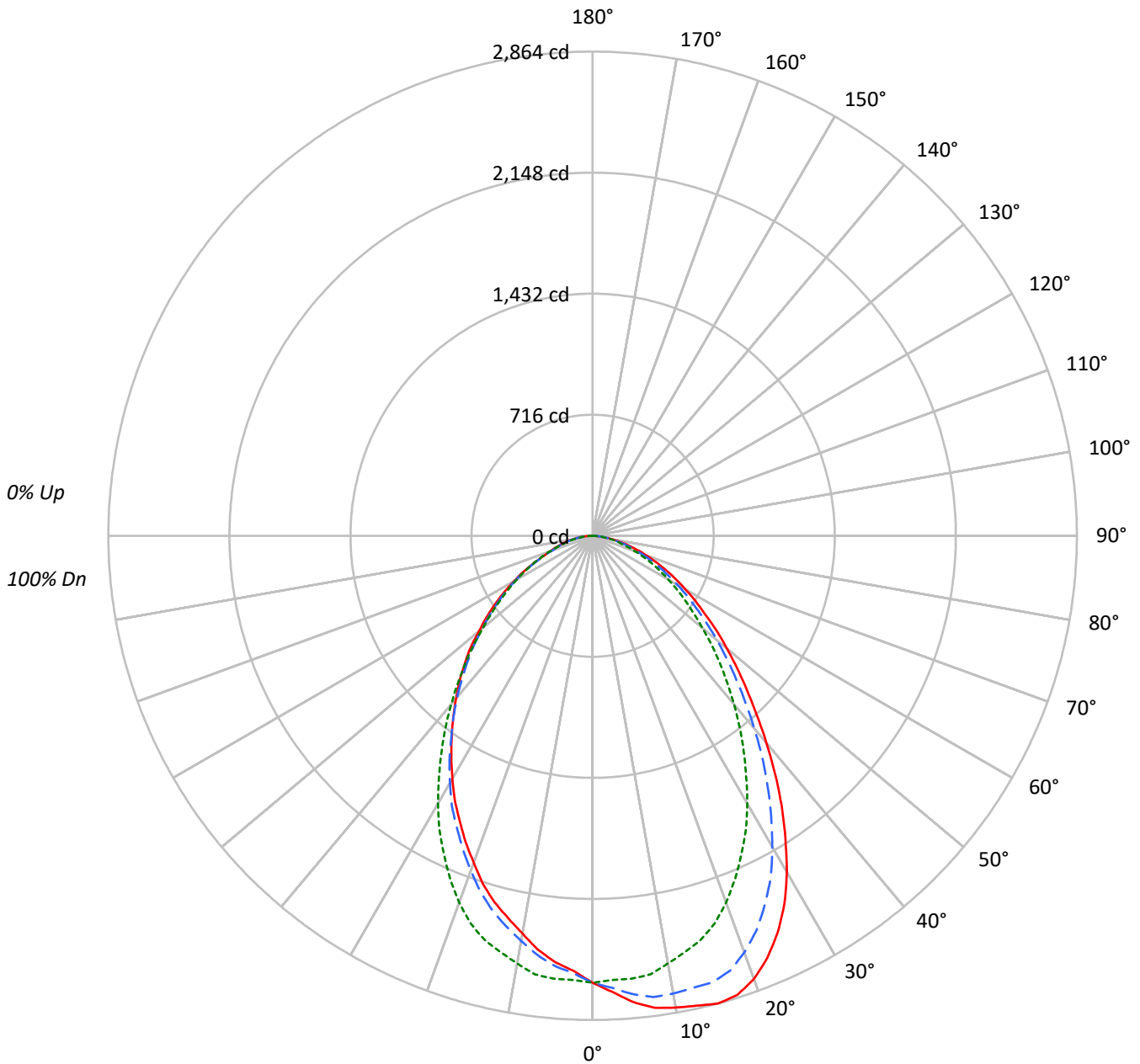
Input Watts (W): 44
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	110	106	103	99	108	104	101	98	100	97	95	96	94	92	92	91	89	87								
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	75								
3	94	85	77	72	92	83	76	71	80	75	70	78	73	69	75	71	68	66								
4	87	76	68	62	85	75	68	62	72	66	61	70	65	60	68	63	60	58								
5	81	69	61	55	79	68	60	55	66	59	54	64	58	53	62	57	53	51								
6	75	63	55	49	73	62	54	49	60	53	48	59	53	48	57	52	47	46								
7	70	58	50	44	68	57	49	44	55	48	43	54	48	43	53	47	43	41								
8	65	53	45	40	64	52	45	40	51	44	39	50	44	39	49	43	39	37								
9	61	49	41	36	60	48	41	36	47	41	36	46	40	36	45	40	36	34								
10	58	45	38	33	57	45	38	33	44	38	33	43	37	33	42	37	33	31								

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	326089	326089	326089
5°	342873	325651	313467
10°	354916	321751	299231
15°	365749	315922	286449
20°	366168	302913	269940
25°	352409	283122	253099
30°	327227	260528	236344
35°	293309	234554	218698
40°	257368	209273	202172
45°	224954	185287	186473
50°	198608	162149	168020
55°	175155	143780	151070
60°	156550	127243	132276
65°	138663	111929	111929
70°	121138	95461	95461
75°	103511	80826	90596
80°	81900	72310	81900
85°	52930	62412	76847



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	250.5	4.9
10°-20°	705.4	13.8
20°-30°	988.2	19.3
30°-40°	1018.1	19.9
40°-50°	866.8	16.9
50°-60°	642.2	12.5
60°-70°	403.0	7.9
70°-80°	200.3	3.9
80°-90°	52.6	1.0
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°	1944.0	37.9
0°-40°	2962.1	57.8
0°-60°	4471.1	87.2
0°-90°	5127.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5127.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2644	2644	2644	2644	2644	
5°	2769	2722	2630	2556	2532	266
15°	2864	2735	2474	2294	2243	805
25°	2589	2410	2080	1900	1860	1184
35°	1948	1802	1558	1456	1452	1215
45°	1290	1201	1062	1042	1069	1001
55°	814	750	669	682	702	736
65°	475	428	384	377	384	474
75°	217	193	170	183	190	232
85°	37	37	44	51	54	48
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°	2643.7	2643.7	2643.7	2643.7	2643.7	2643.7	2643.7	2643.7	2643.7
2.5°	2701.3	2691.1	2677.5	2653.9	2630.1	2609.7	2589.4	2579.1	2575.8
5°	2769.2	2748.9	2721.7	2677.5	2630.1	2589.4	2555.5	2538.4	2531.7
7.5°	2816.7	2796.4	2752.3	2684.4	2616.5	2555.5	2501.2	2477.4	2470.5
10°	2833.7	2809.9	2748.9	2657.2	2568.9	2494.3	2433.3	2402.7	2389.1
12.5°	2847.3	2816.7	2738.7	2630.1	2521.5	2429.8	2365.4	2324.7	2314.5
15°	2864.2	2830.2	2735.3	2602.9	2474.0	2365.4	2294.2	2256.8	2243.2
17.5°	2847.3	2809.9	2698.0	2548.6	2402.7	2283.9	2205.9	2172.0	2158.4
20°	2789.6	2748.9	2623.2	2463.8	2307.7	2185.5	2107.5	2073.6	2056.5
22.5°	2701.3	2657.2	2528.3	2358.6	2199.1	2080.3	2005.7	1971.7	1961.5
25°	2589.4	2545.3	2409.5	2236.4	2080.3	1965.0	1900.4	1869.9	1859.7
27.5°	2457.0	2412.9	2280.6	2110.8	1961.5	1853.0	1802.0	1771.5	1764.7
30°	2297.5	2253.4	2124.4	1968.3	1829.2	1727.3	1686.6	1662.9	1659.4
32.5°	2121.0	2083.7	1965.0	1822.4	1690.1	1605.2	1574.6	1557.7	1554.3
35°	1947.9	1907.2	1802.0	1673.0	1557.7	1483.1	1455.9	1452.4	1452.4
37.5°	1771.5	1730.8	1645.9	1527.2	1428.8	1360.9	1350.7	1354.0	1354.0
40°	1598.4	1561.0	1486.4	1388.0	1299.7	1248.9	1245.4	1252.3	1255.6
42.5°	1435.5	1405.0	1337.1	1252.3	1177.5	1136.9	1140.3	1153.9	1164.0
45°	1289.6	1262.5	1201.3	1126.7	1062.2	1031.7	1041.9	1058.8	1069.0
47.5°	1157.2	1133.4	1075.8	1007.9	953.6	933.3	946.9	967.2	980.7
50°	1035.0	1014.7	960.4	889.2	845.0	831.4	848.5	868.8	875.6
52.5°	926.4	906.1	848.5	787.3	753.4	746.6	763.5	780.6	790.7
55°	814.5	797.5	749.9	695.8	668.6	665.1	682.2	695.8	702.5
57.5°	722.8	705.9	661.8	614.3	590.5	587.1	604.1	614.3	617.7
60°	634.6	617.7	576.9	532.8	515.8	515.8	526.0	532.8	536.2
62.5°	553.1	536.2	498.8	461.6	448.0	448.0	448.0	451.4	461.6
65°	475.1	461.6	427.6	393.7	383.5	376.7	376.7	376.7	383.5
67.5°	403.8	390.2	363.1	332.6	322.4	312.3	308.8	315.6	315.6
70°	335.9	325.8	298.7	274.9	264.7	254.5	251.1	264.7	264.7
72.5°	274.9	264.7	247.7	224.0	213.9	210.4	217.2	224.0	227.4
75°	217.2	207.0	193.4	179.9	169.6	173.1	183.2	186.7	190.1
77.5°	162.9	159.5	146.0	135.8	135.8	139.1	146.0	152.7	156.1
80°	115.3	112.0	105.2	98.4	101.8	108.6	112.0	118.8	115.3
82.5°	71.2	71.2	67.9	67.9	71.2	78.1	81.5	84.8	88.2
85°	37.4	37.4	37.4	40.7	44.1	47.5	50.9	54.3	54.3
87.5°	10.2	13.6	13.6	16.9	20.3	20.3	23.8	23.8	23.8
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)