

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: P580719

Luminaire Tested: **HC445D010-HM44560830-41RWWH**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P580719
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-15)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 9/9/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HC445D010-HM44560830-41RWWH
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4541.5 lumens
Efficiency: N/A
Efficacy: 103.2 lumens/watt
Spacing Criteria (0/90/45): 1.14 / 1.08 / 1.16
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

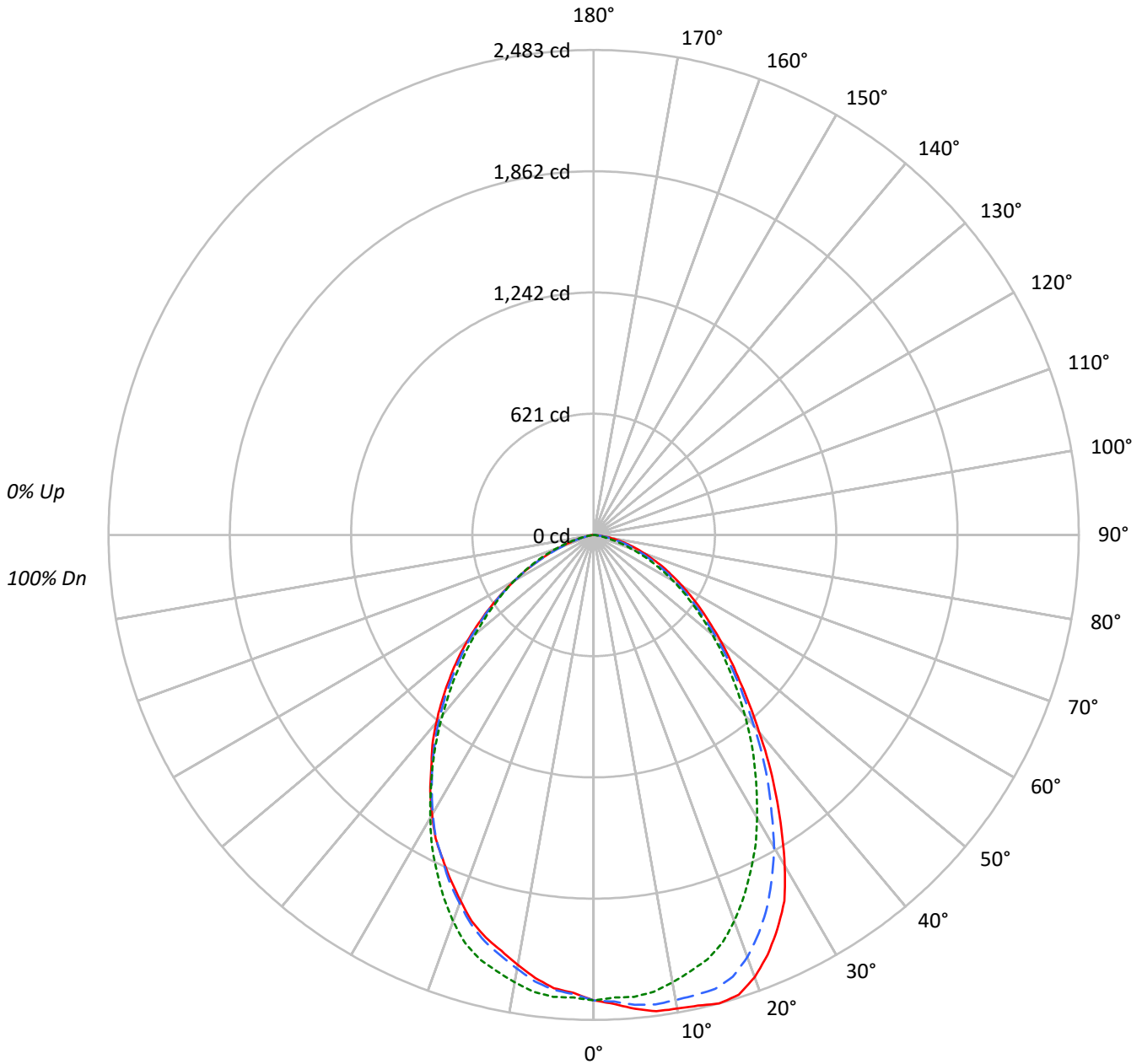
Input Watts (W): 44
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
RC	80									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	107	104	100	108	105	102	99	101	98	96	97	95	93	93	92	90	88																			
2	103	96	90	85	100	94	89	84	90	86	82	87	84	80	84	81	79	77																			
3	95	86	79	73	92	84	78	73	81	76	71	79	74	70	76	72	69	67																			
4	88	77	70	64	86	76	69	63	74	67	62	71	66	62	69	65	61	59																			
5	81	70	62	56	79	69	61	56	67	60	55	65	59	55	63	58	54	52																			
6	76	64	56	50	74	63	55	50	61	54	49	60	54	49	58	53	49	47																			
7	71	58	51	45	69	58	50	45	56	49	45	55	49	44	54	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	41	37	47	41	37	46	41	37	35																			
10	58	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°	293896	293896	293896
5°	301618	293916	288419
10°	308437	291390	279893
15°	317109	287254	272505
20°	316262	276227	261473
25°	302924	258611	248948
30°	278645	238181	235660
35°	245125	216154	217945
40°	212075	193493	201592
45°	184328	171943	182252
50°	163588	151652	161861
55°	145135	133028	138770
60°	129242	115353	115353
65°	114906	95876	89864
70°	99248	72597	64049
75°	83209	47943	39508
80°	63076	23085	21025
85°	33541	8350	8350



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	225.7	5.0
10°-20°	639.7	14.1
20°-30°	902.2	19.9
30°-40°	932.0	20.5
40°-50°	790.1	17.4
50°-60°	574.8	12.7
60°-70°	335.9	7.4
70°-80°	124.8	2.7
80°-90°	16.3	0.4
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°	1767.6	38.9
0°-40°	2699.5	59.4
0°-60°	4064.4	89.5
0°-90°	4541.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4541.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2383	2383	2383	2383	2383	
5°	2436	2415	2374	2338	2329	233
15°	2483	2406	2250	2155	2134	698
25°	2226	2102	1900	1832	1829	1018
35°	1628	1557	1436	1438	1447	1017
45°	1057	1027	986	1021	1045	822
55°	675	642	619	639	645	607
65°	394	361	328	308	308	391
75°	175	145	101	80	83	188
85°	24	15	6	6	6	33
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°	2382.7	2382.7	2382.7	2382.7	2382.7	2382.7	2382.7	2382.7	2382.7
2.5°	2403.4	2397.5	2391.5	2382.7	2370.9	2362.0	2353.1	2347.2	2347.2
5°	2436.0	2427.1	2415.2	2394.6	2373.8	2356.1	2338.2	2329.4	2329.4
7.5°	2459.6	2447.9	2424.2	2394.6	2359.0	2332.4	2305.7	2293.9	2288.0
10°	2462.6	2450.8	2418.2	2373.8	2326.5	2285.1	2255.4	2237.7	2234.7
12.5°	2468.5	2453.7	2412.3	2350.1	2288.0	2237.7	2205.1	2187.3	2181.4
15°	2483.3	2462.6	2406.4	2326.5	2249.5	2190.3	2154.8	2140.0	2134.0
17.5°	2468.5	2438.9	2370.9	2276.1	2190.3	2125.2	2089.7	2074.9	2074.9
20°	2409.4	2379.8	2299.9	2196.2	2104.4	2042.3	2006.8	1997.9	1992.0
22.5°	2326.5	2293.9	2208.1	2098.6	2006.8	1950.6	1926.9	1915.0	1912.1
25°	2225.8	2193.3	2101.5	1989.1	1900.2	1852.9	1832.1	1832.1	1829.2
27.5°	2113.4	2071.9	1977.2	1879.6	1793.6	1758.2	1749.3	1749.3	1752.2
30°	1956.4	1926.9	1846.9	1752.2	1672.3	1648.7	1648.7	1654.6	1654.6
32.5°	1787.8	1767.0	1696.0	1613.1	1550.9	1536.1	1542.1	1554.0	1556.9
35°	1627.9	1604.2	1556.9	1482.9	1435.5	1429.7	1438.5	1447.4	1447.4
37.5°	1471.1	1447.4	1414.8	1355.6	1320.1	1323.1	1335.0	1346.7	1355.6
40°	1317.1	1299.4	1275.7	1228.4	1201.7	1213.6	1228.4	1240.1	1252.0
42.5°	1181.0	1163.2	1145.4	1110.0	1092.2	1107.0	1124.8	1136.6	1148.5
45°	1056.7	1044.8	1027.1	997.5	985.7	1000.5	1021.1	1033.0	1044.8
47.5°	950.1	944.2	920.5	893.9	888.0	902.8	920.5	935.3	944.2
50°	852.5	843.5	822.9	796.2	790.3	814.0	825.8	834.7	843.5
52.5°	757.7	748.8	725.1	701.5	701.5	719.2	728.2	731.1	740.0
55°	674.9	666.0	642.3	624.5	618.6	633.4	639.3	639.3	645.3
57.5°	597.9	589.1	565.4	544.6	541.7	550.6	550.6	550.6	553.5
60°	523.9	515.0	491.3	473.6	467.6	470.6	467.6	464.7	467.6
62.5°	455.9	446.9	423.2	402.6	396.6	396.6	387.8	384.7	387.8
65°	393.7	378.9	361.1	340.4	328.5	319.7	307.9	307.9	307.9
67.5°	331.6	319.7	298.9	278.3	263.4	248.6	230.9	236.7	239.8
70°	275.2	266.4	242.7	222.0	201.3	183.6	168.7	174.6	177.6
72.5°	225.0	213.1	192.4	168.7	150.9	127.2	118.4	124.3	124.3
75°	174.6	162.8	145.1	121.4	100.6	79.9	79.9	82.9	82.9
77.5°	130.3	118.4	100.6	79.9	62.2	47.3	50.3	50.3	50.3
80°	88.8	79.9	65.1	47.3	32.5	26.6	26.6	26.6	29.6
82.5°	50.3	44.4	35.6	23.7	14.8	14.8	14.8	14.8	14.8
85°	23.7	17.7	14.8	8.9	5.9	5.9	5.9	5.9	5.9
87.5°	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
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)