

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: P581243

Luminaire Tested: **HC455D010-HM44560935-41WWW**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P581243
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: HC455D010-HM44560935-41WWW
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4391.8 lumens
Efficiency: N/A
Efficacy: 84.5 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

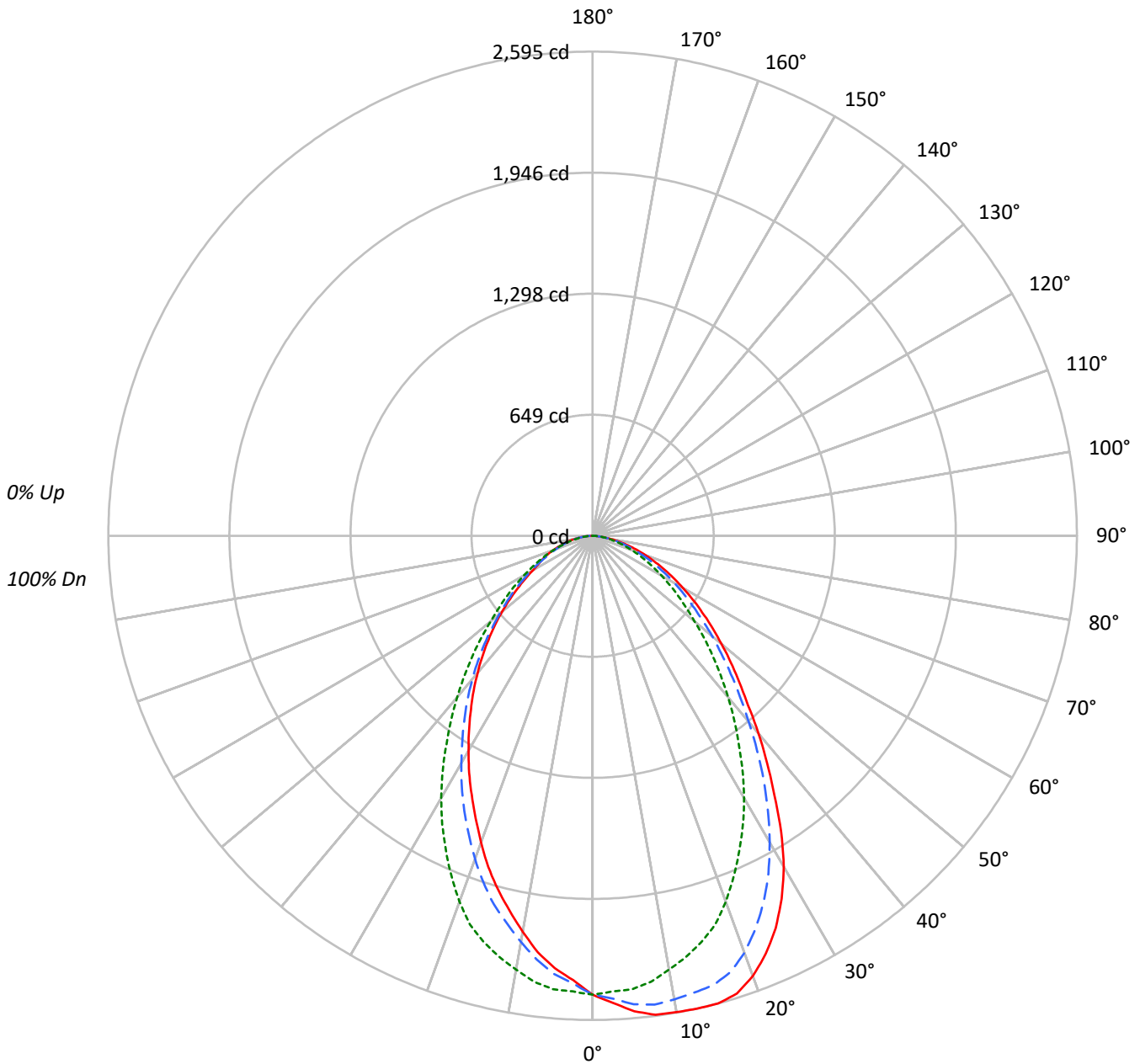
Input Watts (W): 52
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	303356	303356	303356
5°	316686	301989	288023
10°	324707	295699	269973
15°	331411	287816	250503
20°	329637	273825	229393
25°	315799	253195	208705
30°	291762	231174	189158
35°	255740	205628	171206
40°	222686	181691	154205
45°	193800	158494	137788
50°	172664	136589	121583
55°	154296	120082	105136
60°	137752	104942	90634
65°	122436	92024	86128
70°	107470	79304	80350
75°	90977	67578	74488
80°	69824	57536	67835
85°	40900	45004	57317



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	230.5	5.2
10°-20°	635.9	14.5
20°-30°	868.7	19.8
30°-40°	872.3	19.9
40°-50°	721.7	16.4
50°-60°	523.0	11.9
60°-70°	331.2	7.5
70°-80°	167.4	3.8
80°-90°	41.0	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°	1735.1	39.5
0°-40°	2607.5	59.4
0°-60°	3852.1	87.7
0°-90°	4391.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4391.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2459	2459	2459	2459	2459	
5°	2558	2520	2439	2358	2326	245
15°	2595	2494	2254	2046	1962	730
25°	2320	2167	1860	1626	1534	1060
35°	1698	1597	1366	1198	1137	1065
45°	1111	1047	909	819	790	864
55°	718	654	558	509	489	645
65°	420	373	315	284	295	418
75°	191	165	142	148	156	204
85°	29	29	32	38	40	40
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°	2459.4	2459.4	2459.4	2459.4	2459.4	2459.4	2459.4	2459.4	2459.4
2.5°	2505.6	2496.9	2482.4	2465.1	2444.8	2421.7	2401.4	2389.8	2384.1
5°	2557.7	2546.1	2520.1	2482.4	2439.0	2395.7	2358.0	2334.9	2326.2
7.5°	2589.5	2572.2	2534.5	2476.7	2410.1	2346.5	2291.5	2259.7	2251.0
10°	2592.5	2572.2	2522.9	2444.8	2360.9	2277.0	2210.5	2164.2	2155.5
12.5°	2595.3	2569.3	2508.5	2415.9	2311.8	2207.6	2126.6	2071.6	2057.2
15°	2595.3	2569.3	2494.0	2384.1	2253.9	2135.2	2045.6	1981.9	1961.7
17.5°	2572.2	2543.2	2453.5	2326.2	2184.4	2051.3	1947.2	1880.7	1860.4
20°	2511.3	2479.6	2378.2	2239.4	2086.1	1947.2	1843.1	1773.6	1747.6
22.5°	2424.6	2387.0	2279.9	2129.5	1976.2	1834.3	1733.1	1660.7	1637.7
25°	2320.4	2282.8	2167.1	2019.5	1860.4	1727.3	1626.1	1559.5	1533.5
27.5°	2193.1	2152.6	2039.7	1892.2	1744.6	1611.6	1519.0	1458.2	1432.2
30°	2048.5	2005.1	1898.0	1756.2	1623.1	1495.8	1406.1	1357.0	1328.1
32.5°	1880.7	1843.1	1747.6	1620.2	1495.8	1374.3	1299.0	1255.7	1232.6
35°	1698.4	1678.2	1597.0	1487.1	1365.6	1264.4	1197.8	1157.3	1137.0
37.5°	1536.3	1516.0	1446.6	1354.0	1247.1	1154.5	1099.5	1064.7	1047.4
40°	1383.0	1365.6	1299.0	1221.0	1128.4	1047.4	1001.1	975.0	957.7
42.5°	1232.6	1223.9	1168.9	1096.5	1015.5	946.1	908.6	888.3	873.8
45°	1111.0	1099.5	1047.4	978.0	908.6	850.6	818.8	804.4	789.9
47.5°	1004.0	989.6	934.5	873.8	810.1	758.0	729.1	714.6	708.9
50°	899.8	885.4	836.2	775.4	711.8	674.1	651.0	636.5	633.6
52.5°	807.2	792.8	737.8	679.9	630.8	598.9	578.7	564.2	558.4
55°	717.5	700.2	653.8	598.9	558.4	529.4	509.2	494.8	488.9
57.5°	636.5	619.2	578.7	526.6	488.9	462.9	445.6	431.1	425.4
60°	558.4	543.9	506.4	457.1	425.4	402.2	384.9	373.3	367.4
62.5°	486.1	474.5	436.8	393.5	367.4	347.2	332.8	321.2	326.9
65°	419.5	407.9	373.3	335.6	315.3	295.1	283.5	283.5	295.1
67.5°	355.8	344.2	315.3	283.5	266.2	251.7	243.0	251.7	260.4
70°	298.0	286.4	260.4	234.3	219.9	208.4	208.4	217.0	222.8
72.5°	243.0	231.4	211.2	190.9	179.4	170.7	179.4	185.2	190.9
75°	190.9	182.2	164.9	150.4	141.8	138.8	147.6	153.3	156.3
77.5°	141.8	136.0	124.4	112.8	107.1	109.9	118.6	121.5	124.4
80°	98.3	95.5	86.9	81.0	81.0	83.9	89.7	92.6	95.5
82.5°	60.8	60.8	55.0	52.1	55.0	60.8	63.7	66.6	66.6
85°	28.9	31.8	28.9	28.9	31.8	37.6	37.6	40.5	40.5
87.5°	8.7	8.7	11.6	11.6	14.5	14.5	14.5	14.5	17.3
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)