

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: P581279

Luminaire Tested: **HC460D010-HM44560827-41WWW**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P581279  
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: HC460D010-HM44560827-41WWW  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4663.0 lumens  
Efficiency: N/A  
Efficacy: 84.8 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

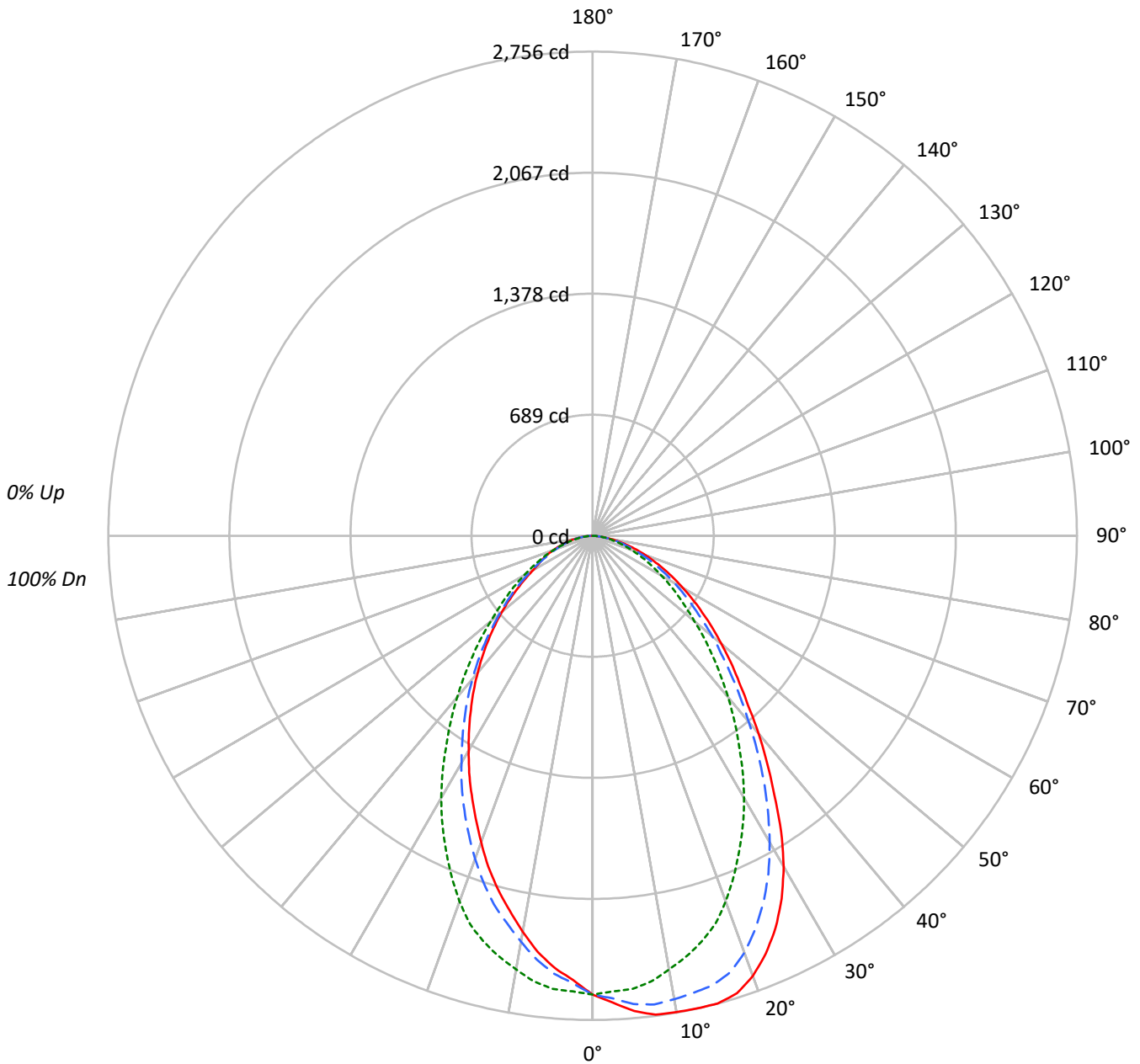
Input Watts (W): 55  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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				
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°	322068	322068	322068
5°	336224	320648	305815
10°	344734	313948	286644
15°	351869	305591	265954
20°	350009	290718	243543
25°	335302	268818	221593
30°	309765	245459	200822
35°	271521	218322	181792
40°	236436	192898	163721
45°	205783	168262	146300
50°	183333	144993	129086
55°	163844	127501	111631
60°	146263	111381	96259
65°	129995	97715	91469
70°	114106	84209	85291
75°	96601	71724	79063
80°	74228	61158	72026
85°	43448	47835	60855



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	244.8	5.2
10°-20°	675.1	14.5
20°-30°	922.4	19.8
30°-40°	926.2	19.9
40°-50°	766.2	16.4
50°-60°	555.3	11.9
60°-70°	351.7	7.5
70°-80°	177.8	3.8
80°-90°	43.5	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°	1842.3	39.5
0°-40°	2768.5	59.4
0°-60°	4089.9	87.7
0°-90°	4663.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4663.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	2611	2611	2611	2611	2611	
5°	2716	2676	2590	2504	2470	260
15°	2756	2648	2393	2172	2083	775
25°	2464	2301	1975	1726	1628	1126
35°	1803	1696	1450	1272	1207	1130
45°	1180	1112	965	869	839	917
55°	762	694	593	541	519	685
65°	445	396	335	301	313	443
75°	203	175	150	157	166	217
85°	31	31	34	40	43	43
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°	2611.1	2611.1	2611.1	2611.1	2611.1	2611.1	2611.1	2611.1	2611.1
2.5°	2660.3	2651.0	2635.7	2617.3	2595.8	2571.2	2549.7	2537.4	2531.2
5°	2715.5	2703.3	2675.6	2635.7	2589.7	2543.5	2503.6	2479.0	2469.9
7.5°	2749.4	2731.0	2691.0	2629.6	2558.9	2491.3	2433.0	2399.1	2390.0
10°	2752.4	2731.0	2678.8	2595.8	2506.6	2417.6	2346.9	2297.8	2288.6
12.5°	2755.5	2727.8	2663.3	2565.1	2454.4	2343.9	2257.9	2199.5	2184.1
15°	2755.5	2727.8	2648.0	2531.2	2393.1	2267.1	2171.9	2104.3	2082.7
17.5°	2731.0	2700.2	2605.0	2469.9	2319.3	2177.9	2067.4	1996.8	1975.2
20°	2666.5	2632.6	2525.1	2377.7	2214.8	2067.4	1956.9	1883.1	1855.4
22.5°	2574.3	2534.4	2420.7	2261.0	2098.1	1947.6	1840.1	1763.3	1738.7
25°	2463.7	2423.7	2300.9	2144.2	1975.2	1833.9	1726.4	1655.8	1628.2
27.5°	2328.5	2285.6	2165.8	2009.1	1852.4	1711.1	1612.8	1548.3	1520.7
30°	2174.9	2128.9	2015.2	1864.7	1723.4	1588.2	1492.9	1440.7	1410.0
32.5°	1996.8	1956.9	1855.4	1720.3	1588.2	1459.2	1379.3	1333.2	1308.6
35°	1803.2	1781.7	1695.7	1579.0	1449.9	1342.4	1271.8	1228.7	1207.3
37.5°	1631.2	1609.7	1536.0	1437.6	1324.0	1225.7	1167.4	1130.5	1112.0
40°	1468.4	1449.9	1379.3	1296.3	1198.0	1112.0	1062.9	1035.3	1016.8
42.5°	1308.6	1299.5	1241.0	1164.2	1078.3	1004.5	964.6	943.1	927.7
45°	1179.7	1167.4	1112.0	1038.3	964.6	903.2	869.3	854.0	838.7
47.5°	1066.0	1050.6	992.2	927.7	860.1	804.8	774.1	758.8	752.6
50°	955.4	940.0	887.7	823.3	755.6	715.7	691.2	675.8	672.7
52.5°	857.1	841.7	783.4	721.9	669.7	635.9	614.4	599.1	592.9
55°	761.9	743.4	694.3	635.9	592.9	562.2	540.7	525.3	519.1
57.5°	675.8	657.4	614.4	559.0	519.1	491.5	473.1	457.7	451.5
60°	592.9	577.5	537.6	485.4	451.5	426.9	408.6	396.3	390.2
62.5°	516.1	503.8	463.8	417.8	390.2	368.6	353.3	341.0	347.1
65°	445.4	433.2	396.3	356.3	334.8	313.4	301.1	301.1	313.4
67.5°	377.9	365.6	334.8	301.1	282.6	267.2	258.1	267.2	276.5
70°	316.4	304.1	276.5	248.8	233.5	221.2	221.2	230.5	236.5
72.5°	258.1	245.8	224.2	202.7	190.4	181.3	190.4	196.6	202.7
75°	202.7	193.6	175.1	159.7	150.5	147.4	156.7	162.8	165.9
77.5°	150.5	144.4	132.1	119.8	113.7	116.7	126.0	129.0	132.1
80°	104.5	101.4	92.2	86.1	86.1	89.1	95.2	98.2	101.4
82.5°	64.5	64.5	58.3	55.3	58.3	64.5	67.6	70.6	70.6
85°	30.7	33.8	30.7	30.7	33.8	39.9	39.9	43.0	43.0
87.5°	9.2	9.2	12.3	12.3	15.3	15.3	15.3	15.3	18.4
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)