

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: P580595

Luminaire Tested: **HC440D010-HM43040835-41WWW**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P580595  
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: HC440D010-HM43040835-41WWW  
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: 4138.1 lumens  
Efficiency: N/A  
Efficacy: 100.9 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

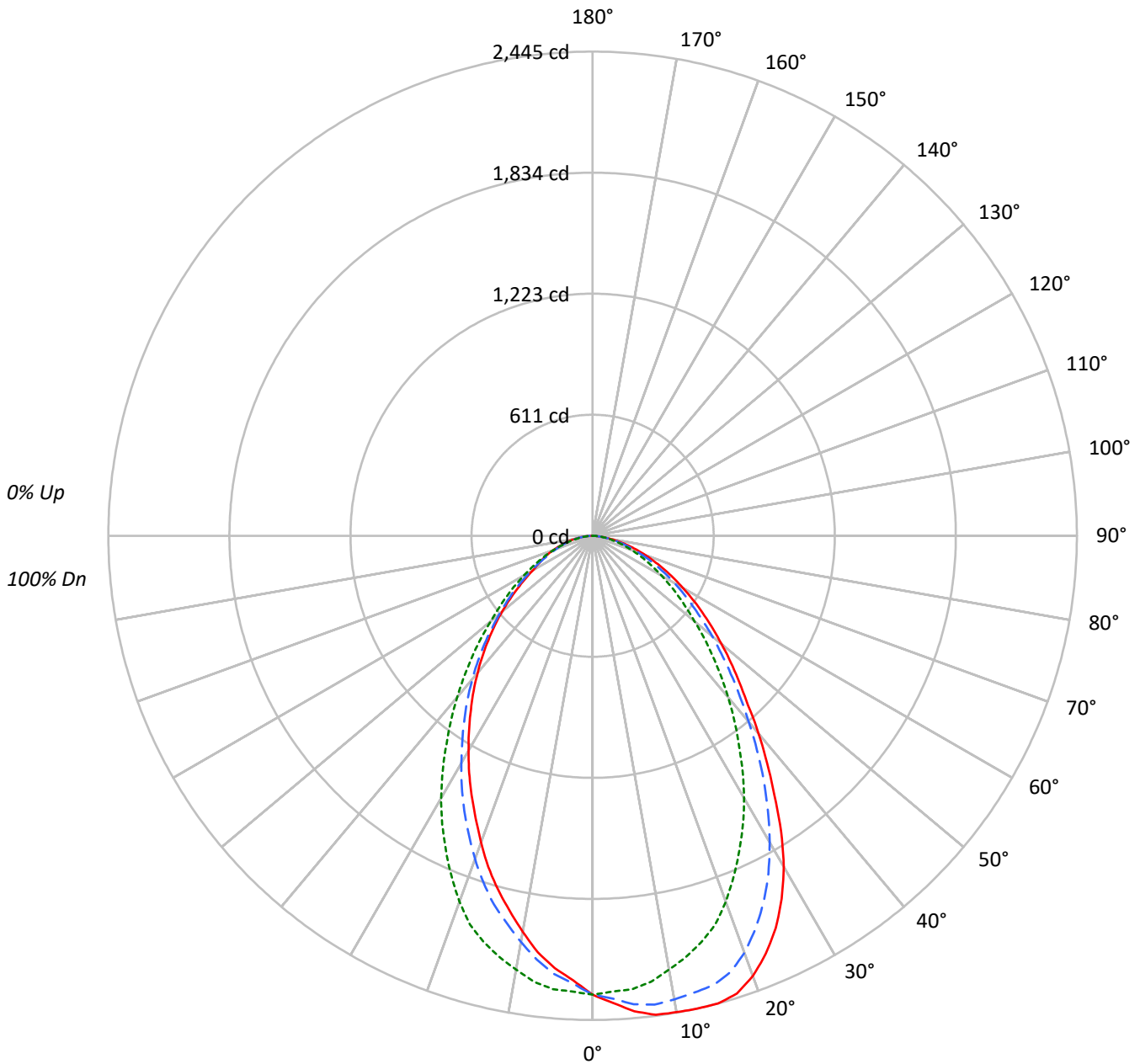
Input Watts (W): 41  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				20				20				20				20				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°	285816	285816	285816
5°	298386	284556	271382
10°	305944	278615	254380
15°	312257	271177	236022
20°	310605	258008	216135
25°	297562	238564	196646
30°	274899	217828	178219
35°	240954	193748	161313
40°	209820	171193	145301
45°	182601	149318	129816
50°	162686	128683	114559
55°	145393	113157	99072
60°	129809	98874	85405
65°	115373	86741	81166
70°	101267	74724	75734
75°	85735	63670	70151
80°	65847	54197	63929
85°	38494	42457	53920



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	217.2	5.2
10°-20°	599.1	14.5
20°-30°	818.6	19.8
30°-40°	821.9	19.9
40°-50°	680.0	16.4
50°-60°	492.8	11.9
60°-70°	312.1	7.5
70°-80°	157.8	3.8
80°-90°	38.6	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°	1634.9	39.5
0°-40°	2456.8	59.4
0°-60°	3629.5	87.7
0°-90°	4138.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4138.1	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	2317	2317	2317	2317	2317	
5°	2410	2374	2298	2222	2192	231
15°	2445	2350	2124	1927	1848	688
25°	2186	2042	1753	1532	1445	999
35°	1600	1505	1287	1129	1071	1003
45°	1047	987	856	772	744	814
55°	676	616	526	480	461	608
65°	395	352	297	267	278	394
75°	180	155	134	139	147	192
85°	27	27	30	35	38	38
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°	2317.2	2317.2	2317.2	2317.2	2317.2	2317.2	2317.2	2317.2	2317.2
2.5°	2360.8	2352.6	2339.1	2322.7	2303.5	2281.8	2262.7	2251.8	2246.4
5°	2409.9	2399.1	2374.5	2339.1	2298.2	2257.2	2221.8	2200.0	2191.8
7.5°	2439.9	2423.5	2388.1	2333.6	2270.9	2210.9	2159.2	2129.1	2120.9
10°	2442.7	2423.5	2377.2	2303.5	2224.5	2145.5	2082.8	2039.1	2031.0
12.5°	2445.3	2420.8	2363.5	2276.3	2178.2	2080.0	2003.7	1951.9	1938.3
15°	2445.3	2420.8	2350.0	2246.4	2123.6	2011.9	1927.3	1867.4	1848.3
17.5°	2423.5	2396.2	2311.7	2191.8	2058.3	1932.8	1834.7	1772.0	1752.9
20°	2366.3	2336.3	2240.9	2110.1	1965.6	1834.7	1736.5	1671.1	1646.6
22.5°	2284.5	2249.1	2148.2	2006.5	1862.0	1728.4	1633.0	1564.8	1542.9
25°	2186.4	2151.0	2041.9	1902.9	1752.9	1627.5	1532.1	1469.4	1444.9
27.5°	2066.5	2028.2	1922.0	1783.0	1643.8	1518.5	1431.2	1374.0	1349.5
30°	1930.1	1889.2	1788.3	1654.8	1529.4	1409.4	1324.9	1278.6	1251.3
32.5°	1772.0	1736.5	1646.6	1526.7	1409.4	1294.9	1224.0	1183.1	1161.4
35°	1600.2	1581.2	1504.8	1401.2	1286.7	1191.3	1128.6	1090.5	1071.3
37.5°	1447.5	1428.5	1363.0	1275.8	1174.9	1087.7	1035.9	1003.2	986.8
40°	1303.1	1286.7	1224.0	1150.5	1063.2	986.8	943.2	918.7	902.4
42.5°	1161.4	1153.2	1101.4	1033.2	956.9	891.4	856.0	836.9	823.3
45°	1046.8	1035.9	986.8	921.5	856.0	801.5	771.5	757.9	744.2
47.5°	946.0	932.3	880.5	823.3	763.3	714.3	686.9	673.4	667.9
50°	847.8	834.2	787.8	730.6	670.6	635.2	613.4	599.7	597.0
52.5°	760.6	746.9	695.1	640.7	594.4	564.3	545.3	531.6	526.2
55°	676.1	659.7	616.1	564.3	526.2	498.8	479.8	466.2	460.7
57.5°	599.7	583.4	545.3	496.2	460.7	436.2	419.8	406.3	400.8
60°	526.2	512.5	477.1	430.7	400.8	378.9	362.5	351.7	346.2
62.5°	458.0	447.1	411.6	370.7	346.2	327.1	313.5	302.6	308.1
65°	395.3	384.4	351.7	316.2	297.2	278.1	267.1	267.1	278.1
67.5°	335.3	324.4	297.2	267.1	250.8	237.2	229.0	237.2	245.4
70°	280.8	269.9	245.4	220.8	207.2	196.3	196.3	204.5	210.0
72.5°	229.0	218.1	199.0	179.9	169.0	160.9	169.0	174.4	179.9
75°	179.9	171.7	155.4	141.8	133.6	130.8	139.0	144.5	147.2
77.5°	133.6	128.1	117.3	106.3	100.9	103.6	111.8	114.5	117.3
80°	92.7	90.0	81.8	76.3	76.3	79.0	84.5	87.2	90.0
82.5°	57.3	57.3	51.8	49.1	51.8	57.3	60.0	62.7	62.7
85°	27.2	30.0	27.2	27.2	30.0	35.4	35.4	38.1	38.1
87.5°	8.2	8.2	10.9	10.9	13.7	13.7	13.7	13.7	16.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



Report Generated By 670245859 / DESKTOP-HRDQ47P







— 0°-180°    - - 45°-225°    - - - - 90°-270°







(END OF REPORT)