

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: P580559

Luminaire Tested: **HC440D010-HM43040827-41WWW**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P580559  
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-HM43040827-41WWW  
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: 3814.0 lumens  
Efficiency: N/A  
Efficacy: 93.0 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

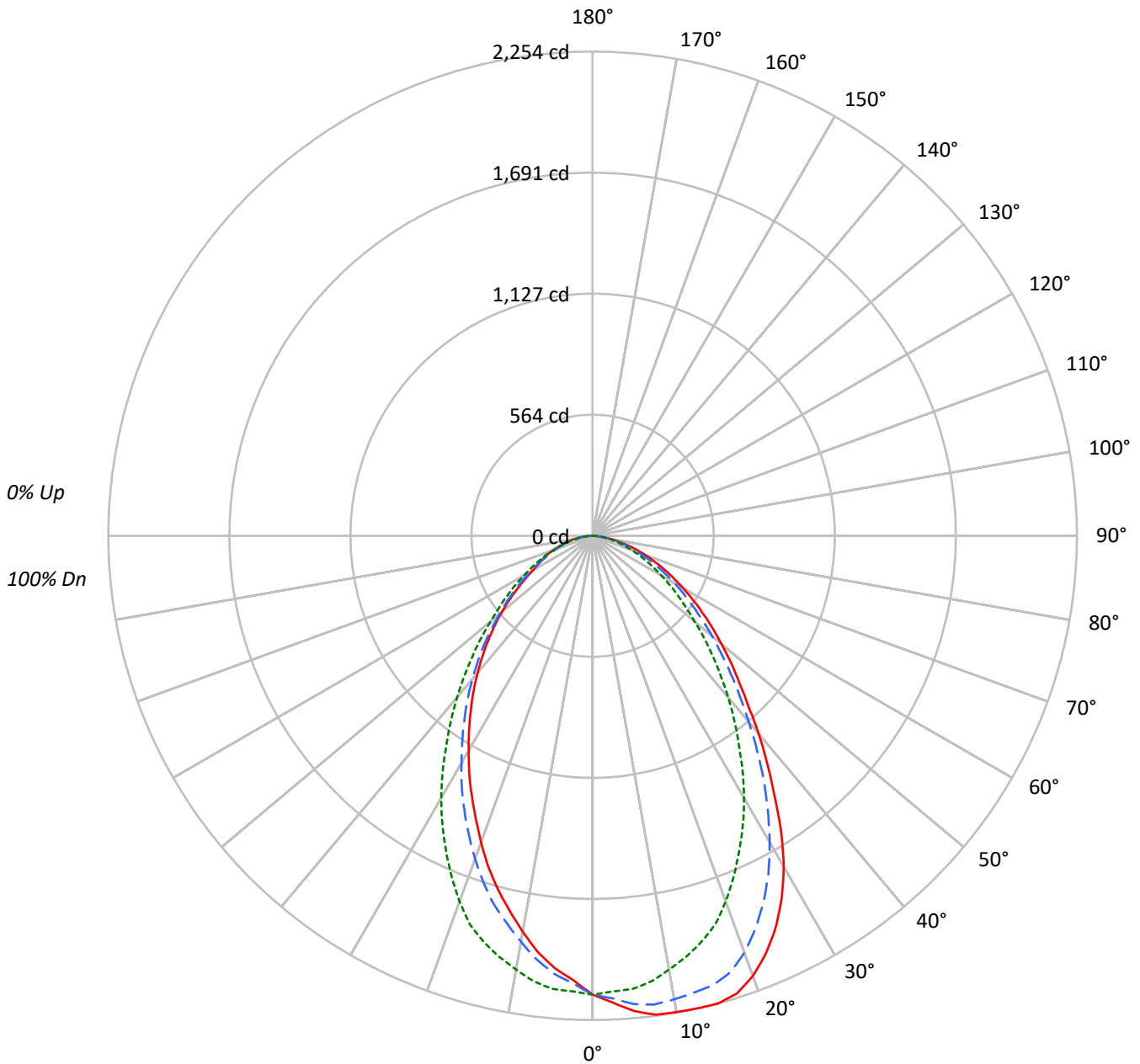
Input Watts (W): 41  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	106	103	100	108	104	101	98	100	97	95	96	94	92	93	91	89	87																			
2	102	95	89	84	100	93	88	83	90	85	81	87	83	80	84	81	78	76																			
3	94	85	78	72	92	84	77	72	81	75	71	78	73	69	76	72	68	66																			
4	87	77	69	63	85	76	68	63	73	67	62	71	66	61	69	64	60	58																			
5	81	70	62	56	79	69	61	56	67	60	55	65	59	54	63	58	54	52																			
6	76	64	56	50	74	63	55	50	61	54	49	59	53	49	58	53	48	47																			
7	71	58	50	45	69	58	50	45	56	49	44	55	49	44	53	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	42	37	47	41	37	46	41	37	35																			
10	59	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°	263429	263429	263429
5°	275009	262256	250135
10°	281972	256797	234465
15°	287816	249954	217544
20°	286282	237794	199203
25°	274249	219878	181240
30°	253364	200751	164261
35°	222086	178585	148695
40°	193381	157796	133917
45°	168297	137631	119646
50°	149944	118608	105598
55°	134017	104276	91309
60°	119621	91128	78719
65°	106325	79941	74804
70°	93333	68846	69784
75°	79015	58666	64623
80°	60661	50006	58956
85°	35522	39202	49816



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	200.2	5.2
10°-20°	552.2	14.5
20°-30°	754.5	19.8
30°-40°	757.6	19.9
40°-50°	626.7	16.4
50°-60°	454.2	11.9
60°-70°	287.7	7.5
70°-80°	145.4	3.8
80°-90°	35.6	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°	1506.9	39.5
0°-40°	2264.4	59.4
0°-60°	3345.3	87.7
0°-90°	3814.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3814.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	2136	2136	2136	2136	2136	
5°	2221	2188	2118	2048	2020	213
15°	2254	2166	1957	1776	1704	634
25°	2015	1882	1616	1412	1332	921
35°	1475	1387	1186	1040	988	924
45°	965	910	789	711	686	750
55°	623	568	485	442	425	560
65°	364	324	274	246	256	363
75°	166	143	123	128	136	177
85°	25	25	28	33	35	35
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°	2135.7	2135.7	2135.7	2135.7	2135.7	2135.7	2135.7	2135.7	2135.7
2.5°	2176.0	2168.5	2155.9	2140.8	2123.2	2103.1	2085.5	2075.4	2070.4
5°	2221.1	2211.2	2188.5	2155.9	2118.1	2080.5	2047.8	2027.7	2020.2
7.5°	2248.8	2233.7	2201.1	2150.9	2093.0	2037.8	1990.0	1962.4	1954.8
10°	2251.3	2233.7	2191.0	2123.2	2050.3	1977.4	1919.7	1879.5	1872.0
12.5°	2253.9	2231.2	2178.4	2098.1	2007.6	1917.1	1846.8	1799.1	1786.5
15°	2253.9	2231.2	2165.9	2070.4	1957.4	1854.4	1776.4	1721.2	1703.6
17.5°	2233.7	2208.6	2130.7	2020.2	1897.1	1781.5	1691.0	1633.2	1615.6
20°	2181.0	2153.3	2065.4	1944.8	1811.6	1691.0	1600.6	1540.3	1517.6
22.5°	2105.6	2073.0	1980.0	1849.3	1716.1	1593.1	1505.1	1442.3	1422.2
25°	2015.1	1982.5	1881.9	1753.8	1615.6	1500.0	1412.1	1354.3	1331.7
27.5°	1904.6	1869.4	1771.4	1643.3	1515.1	1399.6	1319.2	1266.4	1243.7
30°	1778.9	1741.2	1648.3	1525.2	1409.5	1299.0	1221.1	1178.4	1153.3
32.5°	1633.2	1600.6	1517.6	1407.1	1299.0	1193.5	1128.2	1090.5	1070.4
35°	1474.9	1457.3	1387.0	1291.5	1186.0	1098.0	1040.3	1005.1	987.5
37.5°	1334.2	1316.6	1256.3	1175.9	1083.0	1002.5	954.8	924.6	909.6
40°	1201.0	1186.0	1128.2	1060.4	980.0	909.6	869.3	846.8	831.7
42.5°	1070.4	1062.8	1015.1	952.3	881.9	821.6	789.0	771.4	758.8
45°	964.8	954.8	909.6	849.3	789.0	738.7	711.1	698.5	685.9
47.5°	871.9	859.4	811.6	758.8	703.5	658.4	633.1	620.6	615.7
50°	781.4	768.9	726.2	673.4	618.1	585.5	565.3	552.8	550.3
52.5°	701.1	688.5	640.8	590.4	547.7	520.1	502.5	490.0	484.9
55°	623.2	608.0	567.9	520.1	484.9	459.8	442.2	429.7	424.6
57.5°	552.8	537.7	502.5	457.3	424.6	402.0	387.0	374.4	369.4
60°	484.9	472.4	439.8	396.9	369.4	349.3	334.2	324.1	319.1
62.5°	422.2	412.1	379.5	341.7	319.1	301.5	289.0	278.9	283.9
65°	364.3	354.2	324.1	291.5	273.9	256.3	246.3	246.3	256.3
67.5°	309.1	299.0	273.9	246.3	231.2	218.6	211.1	218.6	226.1
70°	258.8	248.7	226.1	203.6	190.9	180.9	180.9	188.4	193.5
72.5°	211.1	201.0	183.4	165.8	155.8	148.2	155.8	160.9	165.8
75°	165.8	158.3	143.3	130.7	123.1	120.6	128.1	133.2	135.6
77.5°	123.1	118.0	108.1	98.0	92.9	95.5	103.0	105.5	108.1
80°	85.4	83.0	75.3	70.4	70.4	72.9	77.9	80.4	83.0
82.5°	52.8	52.8	47.8	45.2	47.8	52.8	55.3	57.8	57.8
85°	25.1	27.7	25.1	25.1	27.7	32.6	32.6	35.2	35.2
87.5°	7.5	7.5	10.1	10.1	12.6	12.6	12.6	12.6	15.0
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)