

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: P580432

Luminaire Tested: **HC435D010-HM43040830-41WWBB**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P580432  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-17)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/9/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HC435D010-HM43040830-41WWBB  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE BAFFLE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

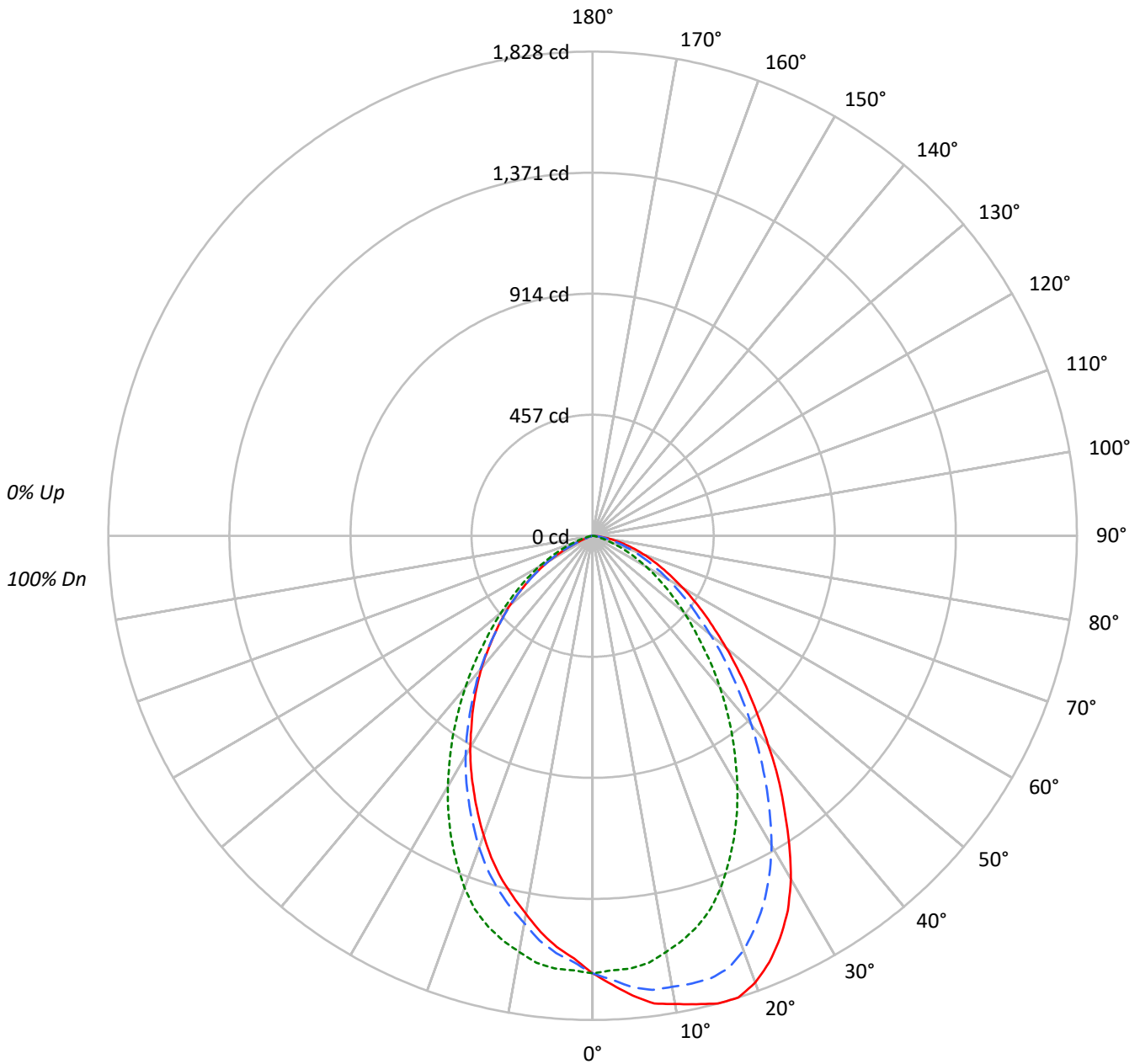
Lumens per Lamp: N/A  
Luminaire Lumens: 2853.0 lumens  
Efficiency: N/A  
Efficacy: 84.7 lumens/watt  
Spacing Criteria (0/90/45): 1.11 / 1.04 / 1.12  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 33.7  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage 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	108	104	101	109	105	102	100	101	99	97	97	95	94	94	92	91	89																			
2	103	97	91	87	101	95	90	86	92	87	84	88	85	82	85	83	80	78																			
3	96	87	80	75	94	86	79	74	83	78	73	80	76	72	78	74	71	69																			
4	89	79	72	66	87	78	71	65	75	69	65	73	68	64	71	67	63	61																			
5	83	72	64	58	81	71	64	58	69	62	58	67	61	57	65	60	56	55																			
6	77	66	58	52	75	65	57	52	63	57	52	61	56	51	60	55	51	49																			
7	72	60	53	47	71	59	52	47	58	51	47	57	51	46	55	50	46	44																			
8	68	56	48	43	66	55	48	43	54	47	42	53	47	42	51	46	42	40																			
9	64	52	44	39	62	51	44	39	50	43	39	49	43	39	48	43	39	37																			
10	60	48	41	36	59	47	41	36	46	40	36	46	40	36	45	39	36	34																			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°
0°	203730	203730	203730
5°	215850	203047	192882
10°	224821	199809	181560
15°	233430	195019	170718
20°	235615	185657	157895
25°	227989	171713	144535
30°	213157	155602	131517
35°	189983	138320	118173
40°	166088	120295	105176
45°	144678	102046	90986
50°	126246	86562	77985
55°	110663	71740	63159
60°	96802	57948	46353
65°	84348	43195	26034
70°	73751	27986	8475
75°	60477	14583	2240
80°	45034	6677	1705
85°	26606	3397	3397



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	155.9	5.5
10°-20°	436.3	15.3
20°-30°	603.2	21.1
30°-40°	606.6	21.3
40°-50°	489.5	17.2
50°-60°	331.0	11.6
60°-70°	168.4	5.9
70°-80°	53.9	1.9
80°-90°	8.3	0.3
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°	1195.4	41.9
0°-40°	1802.0	63.2
0°-60°	2622.4	91.9
0°-90°	2853.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2853.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1652	1652	1652	1652	1652	
5°	1743	1710	1640	1581	1558	168
15°	1828	1729	1527	1382	1337	515
25°	1675	1530	1262	1107	1062	767
35°	1262	1140	919	804	785	788
45°	829	742	585	522	522	643
55°	515	444	334	291	294	462
65°	289	235	148	96	89	290
75°	127	89	31	7	5	137
85°	19	9	2	2	2	25
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°	1651.7	1651.7	1651.7	1651.7	1651.7	1651.7	1651.7	1651.7	1651.7
2.5°	1696.3	1686.9	1677.6	1661.2	1642.3	1623.5	1611.8	1602.4	1597.7
5°	1743.3	1731.6	1710.5	1675.2	1639.9	1607.1	1581.2	1564.8	1557.8
7.5°	1781.0	1764.5	1729.3	1679.9	1625.9	1574.2	1541.2	1517.7	1508.4
10°	1795.0	1776.3	1729.3	1663.4	1595.3	1531.9	1484.9	1461.4	1449.6
12.5°	1811.4	1790.3	1731.6	1649.4	1564.8	1489.6	1435.6	1405.0	1393.3
15°	1828.0	1799.7	1729.3	1628.2	1527.2	1440.3	1381.5	1350.9	1336.9
17.5°	1828.0	1795.0	1710.5	1592.9	1477.8	1386.2	1320.5	1285.2	1273.5
20°	1795.0	1757.5	1665.8	1536.6	1414.4	1315.8	1252.2	1217.1	1202.9
22.5°	1743.3	1701.1	1602.4	1468.4	1339.2	1242.9	1179.4	1146.6	1132.4
25°	1675.2	1632.9	1529.5	1391.0	1261.7	1165.4	1106.6	1076.1	1062.0
27.5°	1595.3	1548.3	1444.9	1306.3	1179.4	1087.8	1033.7	1005.6	993.8
30°	1496.6	1452.0	1350.9	1214.7	1092.5	1007.9	958.7	932.8	923.4
32.5°	1381.5	1344.0	1245.3	1118.4	1003.3	925.7	881.1	860.0	850.5
35°	1261.7	1226.4	1139.5	1022.1	918.6	845.8	803.5	789.4	784.8
37.5°	1149.0	1118.4	1033.7	925.7	831.8	768.3	730.7	721.3	716.6
40°	1031.5	1010.3	932.8	834.1	747.1	690.8	660.2	653.2	653.2
42.5°	925.7	902.2	834.1	744.8	667.3	610.9	589.8	582.7	585.0
45°	829.4	805.9	742.4	660.2	585.0	538.1	521.6	521.6	521.6
47.5°	740.2	718.9	660.2	575.6	514.6	476.9	460.5	460.5	462.9
50°	657.9	643.7	578.0	505.1	451.1	415.9	404.1	401.7	406.4
52.5°	580.3	563.9	505.1	439.4	387.7	359.5	347.8	345.4	347.8
55°	514.6	495.8	444.1	380.6	333.6	305.4	291.3	289.0	293.7
57.5°	451.1	437.0	382.9	326.6	281.9	253.8	242.0	237.3	239.6
60°	392.4	378.2	328.9	274.9	234.9	206.7	190.3	185.6	187.9
62.5°	338.3	326.6	279.5	227.9	187.9	162.1	145.7	133.9	138.6
65°	289.0	277.3	234.9	183.2	148.0	119.8	96.3	86.9	89.2
67.5°	246.7	232.6	192.7	145.7	110.4	79.9	54.1	49.3	49.3
70°	204.5	190.3	155.1	112.7	77.6	42.3	23.5	23.5	23.5
72.5°	164.4	152.8	119.8	84.6	49.3	18.8	9.4	9.4	9.4
75°	126.9	117.5	89.2	58.8	30.6	9.4	7.1	4.7	4.7
77.5°	94.0	84.6	63.4	39.9	18.8	4.7	4.7	4.7	4.7
80°	63.4	56.4	42.3	23.5	9.4	2.4	2.4	2.4	2.4
82.5°	37.5	32.9	23.5	11.8	4.7	2.4	2.4	2.4	2.4
85°	18.8	14.0	9.4	4.7	2.4	2.4	2.4	2.4	2.4
87.5°	4.7	2.4	2.4	2.4	0.0	0.0	0.0	0.0	0.0
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)