

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: P580430

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

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P580430  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-14)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/9/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HC435D010-HM43040830-41RWWC  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, SPECULAR TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

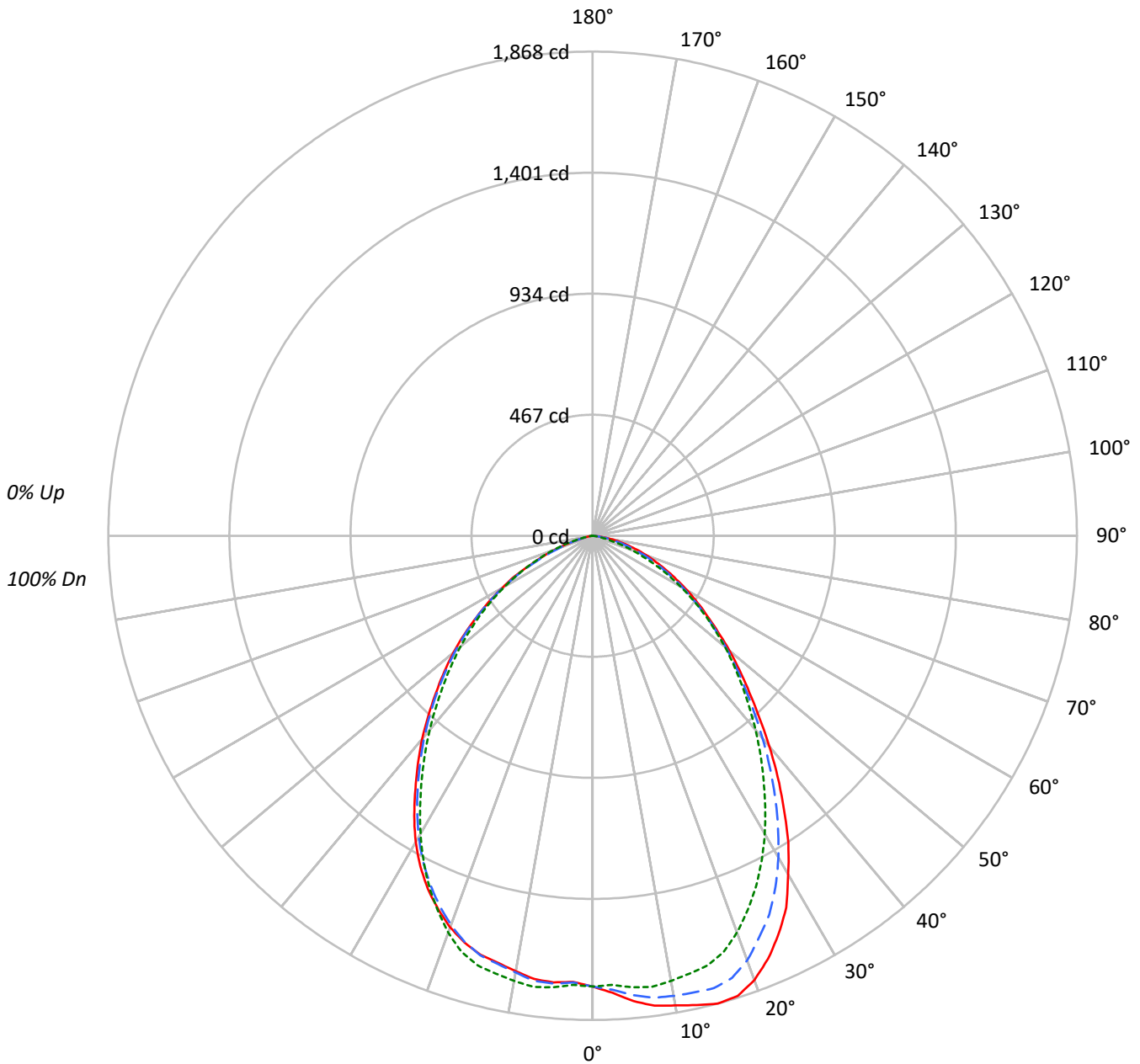
Lumens per Lamp: N/A  
Luminaire Lumens: 3623.9 lumens  
Efficiency: N/A  
Efficacy: 107.5 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.15 / 1.21  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 33.7  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage 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	107	103	100	108	105	102	99	101	98	96	97	95	93	93	92	90	88																			
2	102	95	90	85	100	94	88	84	90	86	82	87	83	80	84	81	78	76																			
3	95	85	78	73	92	84	77	72	81	75	71	78	74	70	76	72	69	67																			
4	87	77	69	63	85	76	68	63	73	67	62	71	66	61	69	64	60	58																			
5	81	70	61	56	79	68	61	55	66	60	55	65	59	54	63	58	54	52																			
6	75	63	55	49	74	62	55	49	61	54	49	59	53	48	58	52	48	46																			
7	70	58	50	44	69	57	49	44	56	49	44	54	48	44	53	47	43	41																			
8	66	53	45	40	64	53	45	40	51	44	40	50	44	39	49	43	39	37																			
9	62	49	42	36	60	49	41	36	47	41	36	46	40	36	45	40	36	34																			
10	58	46	38	33	57	45	38	33	44	38	33	43	37	33	42	37	33	31																			

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

	0°	90°	180°
0°	214510	214510	214510
5°	223167	216481	214154
10°	230470	218396	213686
15°	238576	219077	213662
20°	239369	213773	210990
25°	230916	203084	204690
30°	214880	189115	194456
35°	193552	173043	179398
40°	170645	157426	164607
45°	149213	141835	148795
50°	132137	127627	134382
55°	116233	112684	117265
60°	103758	96234	99121
65°	91236	78160	76818
70°	79665	57630	52545
75°	66100	34694	28022
80°	50078	13354	8382
85°	23210	3397	3397



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	167.7	4.6
10°-20°	489.5	13.5
20°-30°	708.9	19.6
30°-40°	747.9	20.6
40°-50°	647.3	17.9
50°-60°	479.5	13.2
60°-70°	276.4	7.6
70°-80°	96.5	2.7
80°-90°	10.2	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°	1366.1	37.7
0°-40°	2114.0	58.3
0°-60°	3240.8	89.4
0°-90°	3623.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3623.9	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1739	1739	1739	1739	1739	
5°	1802	1779	1748	1734	1730	173
15°	1868	1807	1716	1676	1673	525
25°	1697	1612	1492	1483	1504	777
35°	1285	1227	1149	1175	1191	803
45°	855	832	813	844	853	664
55°	540	529	524	543	545	487
65°	313	294	268	254	263	312
75°	139	118	73	59	59	149
85°	16	9	2	2	2	26
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°	1739.1	1739.1	1739.1	1739.1	1739.1	1739.1	1739.1	1739.1	1739.1
2.5°	1764.9	1760.2	1753.1	1743.7	1734.3	1727.3	1724.9	1722.5	1722.5
5°	1802.4	1793.1	1779.0	1760.2	1748.4	1741.4	1734.3	1729.6	1729.6
7.5°	1828.3	1819.0	1797.7	1771.9	1755.5	1741.4	1732.0	1724.9	1724.9
10°	1840.1	1828.3	1802.4	1769.5	1743.7	1724.9	1710.8	1706.1	1706.1
12.5°	1854.2	1840.1	1804.8	1762.5	1729.6	1706.1	1692.1	1687.3	1687.3
15°	1868.3	1851.8	1807.2	1757.8	1715.6	1687.3	1675.5	1673.2	1673.2
17.5°	1861.2	1840.1	1788.4	1729.6	1682.6	1654.4	1642.6	1642.6	1645.0
20°	1823.6	1802.4	1743.7	1677.9	1628.6	1607.4	1598.0	1602.7	1607.4
22.5°	1767.3	1741.4	1677.9	1614.5	1562.8	1543.9	1543.9	1551.0	1558.1
25°	1696.7	1673.2	1612.2	1541.6	1492.2	1478.2	1482.9	1494.6	1504.0
27.5°	1616.8	1590.9	1527.5	1461.8	1412.4	1405.3	1417.0	1433.5	1438.2
30°	1508.7	1487.6	1433.5	1370.0	1327.8	1325.4	1341.8	1353.6	1365.3
32.5°	1405.3	1381.8	1330.1	1269.0	1238.4	1240.8	1259.7	1273.7	1280.8
35°	1285.4	1264.3	1226.7	1177.4	1149.2	1153.9	1175.0	1189.1	1191.4
37.5°	1172.7	1158.5	1121.0	1083.3	1062.2	1071.6	1090.4	1106.9	1106.9
40°	1059.8	1048.1	1019.9	989.3	977.7	989.3	1008.1	1022.3	1022.3
42.5°	951.8	944.7	921.2	900.1	893.0	909.4	926.0	937.6	935.3
45°	855.4	848.4	831.9	815.5	813.1	829.5	843.7	850.8	853.0
47.5°	768.5	763.8	749.7	737.9	737.9	754.3	766.1	773.2	775.6
50°	688.6	683.8	672.2	662.7	665.1	681.5	690.9	698.0	700.3
52.5°	608.6	606.3	597.0	585.2	592.2	603.9	615.7	620.4	622.8
55°	540.5	540.5	528.7	519.4	524.0	535.8	542.9	545.3	545.3
57.5°	479.4	477.0	463.0	453.5	455.9	467.7	472.3	474.7	474.7
60°	420.6	418.4	404.2	390.1	390.1	397.1	399.5	401.8	401.8
62.5°	364.3	361.9	345.4	333.7	329.0	326.6	326.6	331.4	340.8
65°	312.6	310.2	293.7	274.9	267.8	260.9	253.8	258.5	263.2
67.5°	265.6	260.9	244.4	227.9	211.5	199.7	188.0	195.0	204.5
70°	220.9	216.3	197.4	178.6	159.8	140.9	131.6	140.9	145.7
72.5°	178.6	173.9	155.1	136.3	112.8	94.0	91.6	94.0	96.3
75°	138.7	136.3	117.5	96.3	72.8	58.8	58.8	58.8	58.8
77.5°	103.4	98.7	79.9	61.1	42.3	32.9	30.6	30.6	30.6
80°	70.5	65.8	49.3	35.3	18.8	14.0	14.0	11.8	11.8
82.5°	39.9	37.7	25.9	14.0	7.1	4.7	4.7	4.7	4.7
85°	16.4	14.0	9.4	4.7	2.4	2.4	2.4	2.4	2.4
87.5°	2.4	2.4	2.4	0.0	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)