

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: P580448

Luminaire Tested: **HC435D010-HM43040835-41RWWC**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P580448  
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-HM43040835-41RWWC  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, SPECULAR TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3634.2 lumens  
Efficiency: N/A  
Efficacy: 107.8 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

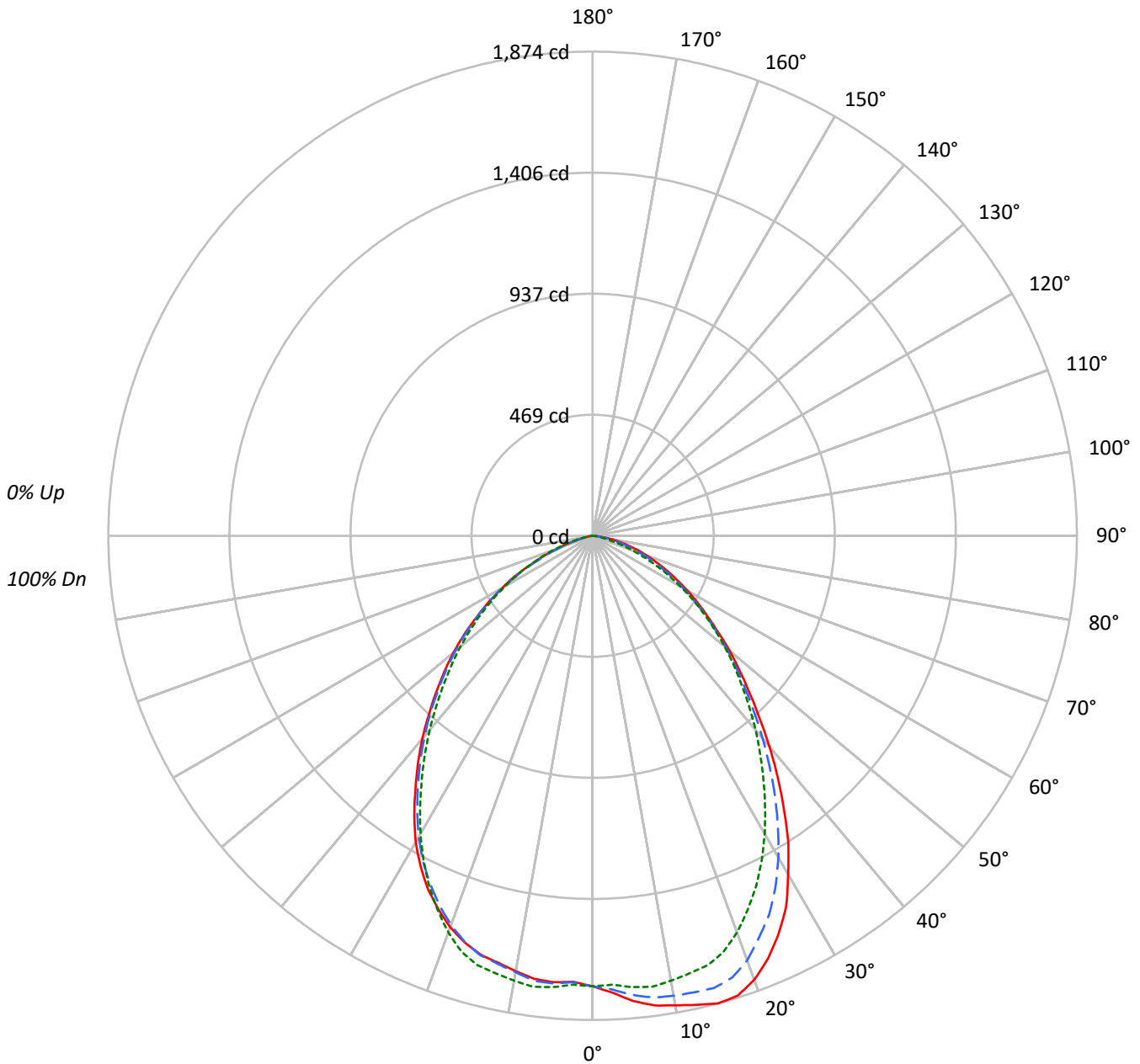
Input Watts (W): 33.7  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	215115	215115	215115
5°	223811	217100	214773
10°	231133	219022	214300
15°	239253	219690	214275
20°	240064	214377	211594
25°	231582	203669	205275
30°	215492	189656	195026
35°	194109	173525	179925
40°	171144	157860	165074
45°	149632	142253	149231
50°	132501	127992	134766
55°	116577	113028	117566
60°	104054	96530	99417
65°	91498	78394	77022
70°	79881	57810	52689
75°	66243	34837	28070
80°	50220	13425	8382
85°	23351	3397	3397



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	168.2	4.6
10°-20°	490.9	13.5
20°-30°	710.9	19.6
30°-40°	750.0	20.6
40°-50°	649.1	17.9
50°-60°	480.9	13.2
60°-70°	277.2	7.6
70°-80°	96.8	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°	1370.0	37.7
0°-40°	2120.1	58.3
0°-60°	3250.1	89.4
0°-90°	3634.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3634.2	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1744	1744	1744	1744	1744	
5°	1808	1784	1753	1739	1735	174
15°	1874	1812	1720	1680	1678	527
25°	1702	1617	1496	1487	1508	779
35°	1289	1230	1152	1178	1195	805
45°	858	834	816	846	856	666
55°	542	530	526	544	547	489
65°	314	295	269	254	264	313
75°	139	118	73	59	59	150
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°	1744.0	1744.0	1744.0	1744.0	1744.0	1744.0	1744.0	1744.0	1744.0
2.5°	1770.0	1765.2	1758.2	1748.7	1739.3	1732.2	1729.8	1727.5	1727.5
5°	1807.6	1798.2	1784.0	1765.2	1753.4	1746.4	1739.3	1734.6	1734.6
7.5°	1833.6	1824.1	1802.9	1776.9	1760.5	1746.4	1736.9	1729.8	1729.8
10°	1845.4	1833.6	1807.6	1774.7	1748.7	1729.8	1715.7	1711.0	1711.0
12.5°	1859.4	1845.4	1810.0	1767.6	1734.6	1711.0	1696.9	1692.2	1692.2
15°	1873.6	1857.1	1812.3	1762.9	1720.4	1692.2	1680.4	1678.0	1678.0
17.5°	1866.5	1845.4	1793.5	1734.6	1687.5	1659.1	1647.3	1647.3	1649.7
20°	1828.9	1807.6	1748.7	1682.7	1633.2	1612.0	1602.6	1607.3	1612.0
22.5°	1772.3	1746.4	1682.7	1619.1	1567.2	1548.4	1548.4	1555.5	1562.5
25°	1701.6	1678.0	1616.8	1546.1	1496.5	1482.4	1487.1	1498.9	1508.3
27.5°	1621.5	1595.5	1531.9	1465.9	1416.4	1409.4	1421.1	1437.6	1442.3
30°	1513.0	1491.8	1437.6	1374.0	1331.6	1329.2	1345.7	1357.5	1369.3
32.5°	1409.4	1385.8	1334.0	1272.6	1242.0	1244.4	1263.3	1277.3	1284.4
35°	1289.1	1268.0	1230.2	1180.8	1152.4	1157.2	1178.4	1192.6	1194.9
37.5°	1176.0	1161.9	1124.1	1086.5	1065.2	1074.7	1093.5	1110.1	1110.1
40°	1062.9	1051.1	1022.8	992.2	980.4	992.2	1011.0	1025.2	1025.2
42.5°	954.5	947.4	923.8	902.7	895.6	912.0	928.5	940.3	938.0
45°	857.8	850.8	834.2	817.8	815.5	832.0	846.0	853.1	855.5
47.5°	770.6	765.9	751.8	740.0	740.0	756.6	768.3	775.3	777.7
50°	690.5	685.9	674.1	664.6	667.0	683.5	692.8	699.9	702.3
52.5°	610.4	608.1	598.6	586.8	593.9	605.7	617.4	622.1	624.5
55°	542.1	542.1	530.3	520.9	525.6	537.4	544.4	546.7	546.7
57.5°	480.7	478.4	464.3	454.9	457.2	469.0	473.7	476.0	476.0
60°	421.8	419.5	405.3	391.3	391.3	398.3	400.6	403.0	403.0
62.5°	365.3	362.9	346.4	334.6	329.9	327.5	327.5	332.3	341.7
65°	313.5	311.1	294.6	275.7	268.6	261.6	254.5	259.2	263.9
67.5°	266.3	261.6	245.1	228.6	212.1	200.3	188.5	195.6	205.0
70°	221.5	216.8	197.9	179.2	160.3	141.4	132.0	141.4	146.1
72.5°	179.2	174.4	155.6	136.7	113.1	94.3	91.9	94.3	96.7
75°	139.0	136.7	117.8	96.7	73.1	58.9	58.9	58.9	58.9
77.5°	103.7	99.0	80.1	61.3	42.4	33.0	30.7	30.7	30.7
80°	70.7	66.0	49.5	35.4	18.9	14.2	14.2	11.8	11.8
82.5°	40.0	37.7	26.0	14.2	7.1	4.7	4.7	4.7	4.7
85°	16.5	14.2	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)