

Classified  
Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269



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: P580668

Luminaire Tested: **HCC4W40D010BZ-HM43040935-41WWWB**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P580668  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-18)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/9/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HCC4W40D010BZ-HM43040935-41WWWB  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, BLACK BAFFLE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT  
CYLINDER  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

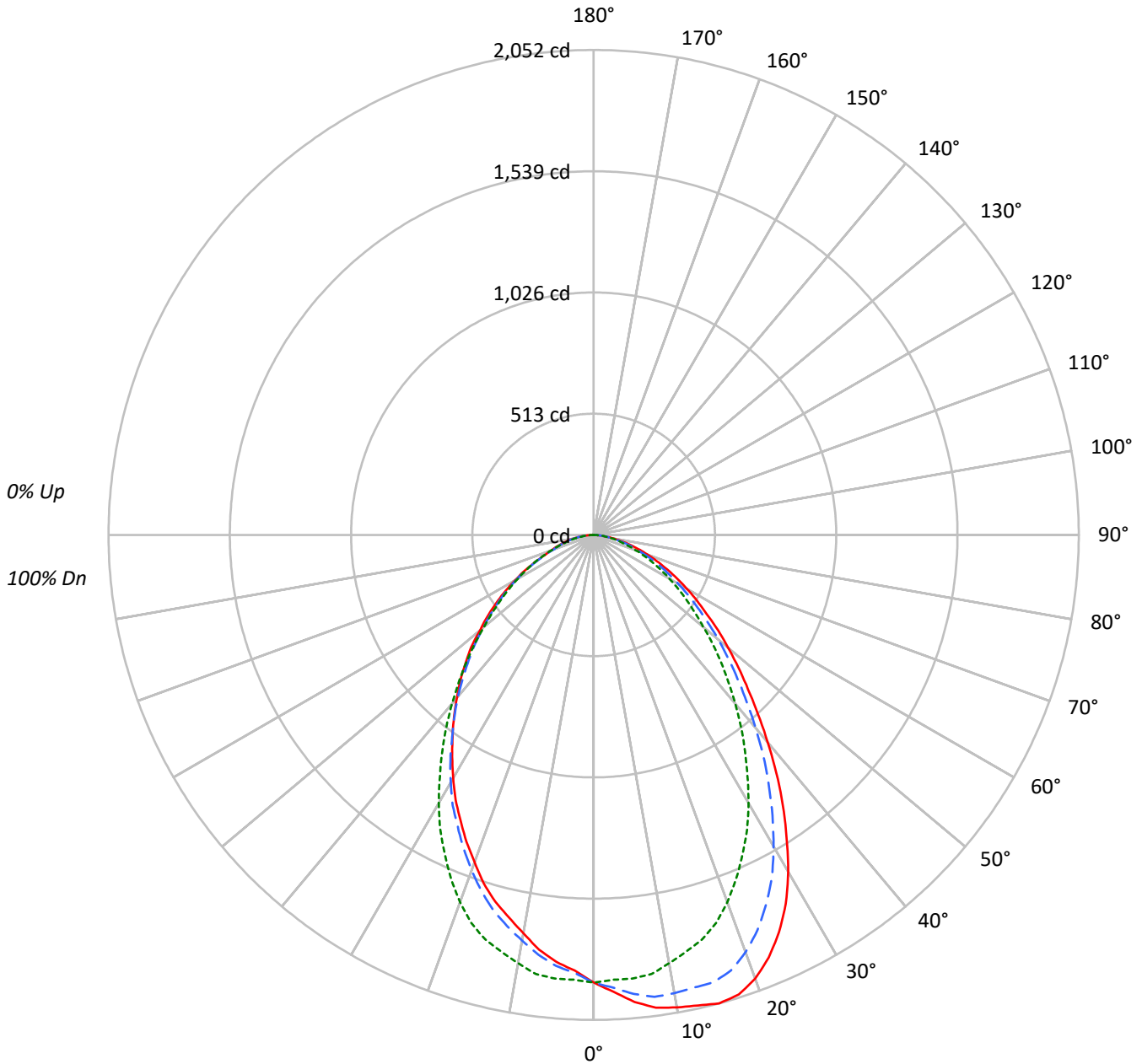
Lumens per Lamp: N/A  
Luminaire Lumens: 3672.4 lumens  
Efficiency: N/A  
Efficacy: 89.6 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.07 / 1.15  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

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					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								
1	110	106	103	99	108	104	101	98	100	97	95	96	94	92	92	91	89	87								
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	75								
3	94	85	77	72	92	83	76	71	80	75	70	78	73	69	75	71	68	66								
4	87	76	68	62	85	75	68	62	72	66	61	70	65	60	68	63	60	58								
5	81	69	61	55	79	68	60	55	66	59	54	64	58	53	62	57	53	51								
6	75	63	55	49	73	62	54	49	60	53	48	59	53	48	57	52	47	46								
7	70	58	50	44	68	57	49	44	55	48	43	54	48	43	53	47	43	41								
8	65	53	45	40	64	52	45	40	51	44	39	50	44	39	49	43	39	37								
9	61	49	41	36	60	48	41	36	47	41	36	46	40	36	45	40	36	34								
10	58	45	38	33	57	45	38	33	44	38	33	43	37	33	42	37	33	31								

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

	0°	90°	180°
0°	233567	233567	233567
5°	245591	233246	224529
10°	254229	230470	214338
15°	261996	226291	205170
20°	262287	216962	193362
25°	252419	202798	181295
30°	234378	186608	169303
35°	210100	167999	156661
40°	184348	149906	144818
45°	161128	132712	133584
50°	142269	116133	120354
55°	125458	102986	108211
60°	112146	91152	94754
65°	99320	80145	80145
70°	86806	68377	68377
75°	74154	57903	64861
80°	58672	51853	58672
85°	37928	44721	55053



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	179.4	4.9
10°-20°	505.2	13.8
20°-30°	707.8	19.3
30°-40°	729.2	19.9
40°-50°	620.9	16.9
50°-60°	460.0	12.5
60°-70°	288.7	7.9
70°-80°	143.4	3.9
80°-90°	37.7	1.0
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°	1392.5	37.9
0°-40°	2121.7	57.8
0°-60°	3202.6	87.2
0°-90°	3672.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3672.4	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1894	1894	1894	1894	1894	
5°	1984	1950	1884	1830	1813	191
15°	2052	1959	1772	1643	1607	577
25°	1855	1726	1490	1361	1332	848
35°	1395	1291	1116	1043	1040	870
45°	924	860	761	746	766	717
55°	583	537	479	489	503	527
65°	340	306	275	270	275	339
75°	156	139	122	131	136	166
85°	27	27	32	36	39	34
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°	1893.6	1893.6	1893.6	1893.6	1893.6	1893.6	1893.6	1893.6	1893.6
2.5°	1935.0	1927.7	1917.9	1900.9	1883.8	1869.3	1854.7	1847.4	1844.9
5°	1983.5	1968.9	1949.5	1917.9	1883.8	1854.7	1830.4	1818.3	1813.4
7.5°	2017.6	2003.0	1971.4	1922.7	1874.2	1830.4	1791.5	1774.5	1769.6
10°	2029.8	2012.8	1968.9	1903.3	1840.1	1786.6	1742.9	1721.1	1711.3
12.5°	2039.4	2017.6	1961.6	1883.8	1806.2	1740.5	1694.3	1665.1	1657.8
15°	2051.7	2027.3	1959.3	1864.4	1772.1	1694.3	1643.3	1616.5	1606.7
17.5°	2039.4	2012.8	1932.5	1825.5	1721.1	1636.0	1580.0	1555.7	1546.0
20°	1998.2	1968.9	1879.0	1764.8	1652.9	1565.5	1509.5	1485.2	1473.1
22.5°	1935.0	1903.3	1811.0	1689.5	1575.2	1490.1	1436.7	1412.3	1405.1
25°	1854.7	1823.1	1725.9	1601.9	1490.1	1407.4	1361.2	1339.4	1332.1
27.5°	1760.0	1728.4	1633.5	1512.0	1405.1	1327.3	1290.7	1268.9	1264.0
30°	1645.6	1614.0	1521.6	1409.9	1310.2	1237.2	1208.1	1191.1	1188.7
32.5°	1519.3	1492.5	1407.4	1305.4	1210.6	1149.8	1128.0	1115.7	1113.3
35°	1395.3	1366.2	1290.7	1198.3	1115.7	1062.3	1042.9	1040.4	1040.4
37.5°	1268.9	1239.7	1179.0	1093.9	1023.4	974.7	967.4	969.9	969.9
40°	1144.9	1118.2	1064.7	994.2	931.0	894.6	892.1	897.0	899.4
42.5°	1028.3	1006.3	957.8	897.0	843.4	814.3	816.8	826.5	833.8
45°	923.7	904.3	860.5	807.0	760.8	739.0	746.2	758.5	765.8
47.5°	828.9	811.9	770.6	721.9	683.0	668.5	678.2	692.8	702.5
50°	741.4	726.9	688.0	636.8	605.2	595.6	607.7	622.3	627.2
52.5°	663.6	649.1	607.7	564.0	539.6	534.8	546.9	559.0	566.3
55°	583.4	571.3	537.2	498.3	478.9	476.4	488.6	498.3	503.2
57.5°	517.8	505.6	474.0	440.0	423.0	420.5	432.7	440.0	442.5
60°	454.6	442.5	413.2	381.6	369.5	369.5	376.8	381.6	384.1
62.5°	396.3	384.1	357.4	330.6	320.8	320.8	320.8	323.3	330.6
65°	340.3	330.6	306.3	281.9	274.6	269.8	269.8	269.8	274.6
67.5°	289.2	279.6	260.1	238.2	230.9	223.6	221.2	226.1	226.1
70°	240.7	233.4	213.9	196.8	189.6	182.3	179.9	189.6	189.6
72.5°	196.8	189.6	177.5	160.4	153.1	150.7	155.6	160.4	162.9
75°	155.6	148.3	138.6	128.8	121.5	124.0	131.3	133.7	136.1
77.5°	116.7	114.2	104.5	97.2	97.2	99.7	104.5	109.4	111.8
80°	82.6	80.3	75.3	70.5	73.0	77.8	80.3	85.1	82.6
82.5°	51.0	51.0	48.7	48.7	51.0	55.9	58.3	60.8	63.2
85°	26.8	26.8	26.8	29.1	31.6	34.1	36.4	38.9	38.9
87.5°	7.3	9.8	9.8	12.1	14.6	14.6	17.0	17.0	17.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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Scaled Data Report



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

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