

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: P580560

Luminaire Tested: **HCC4W40D010BZ-HM43040827-41WWWB**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P580560  
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-HM43040827-41WWWB  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, BLACK BAFFLE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT  
CYLINDER  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

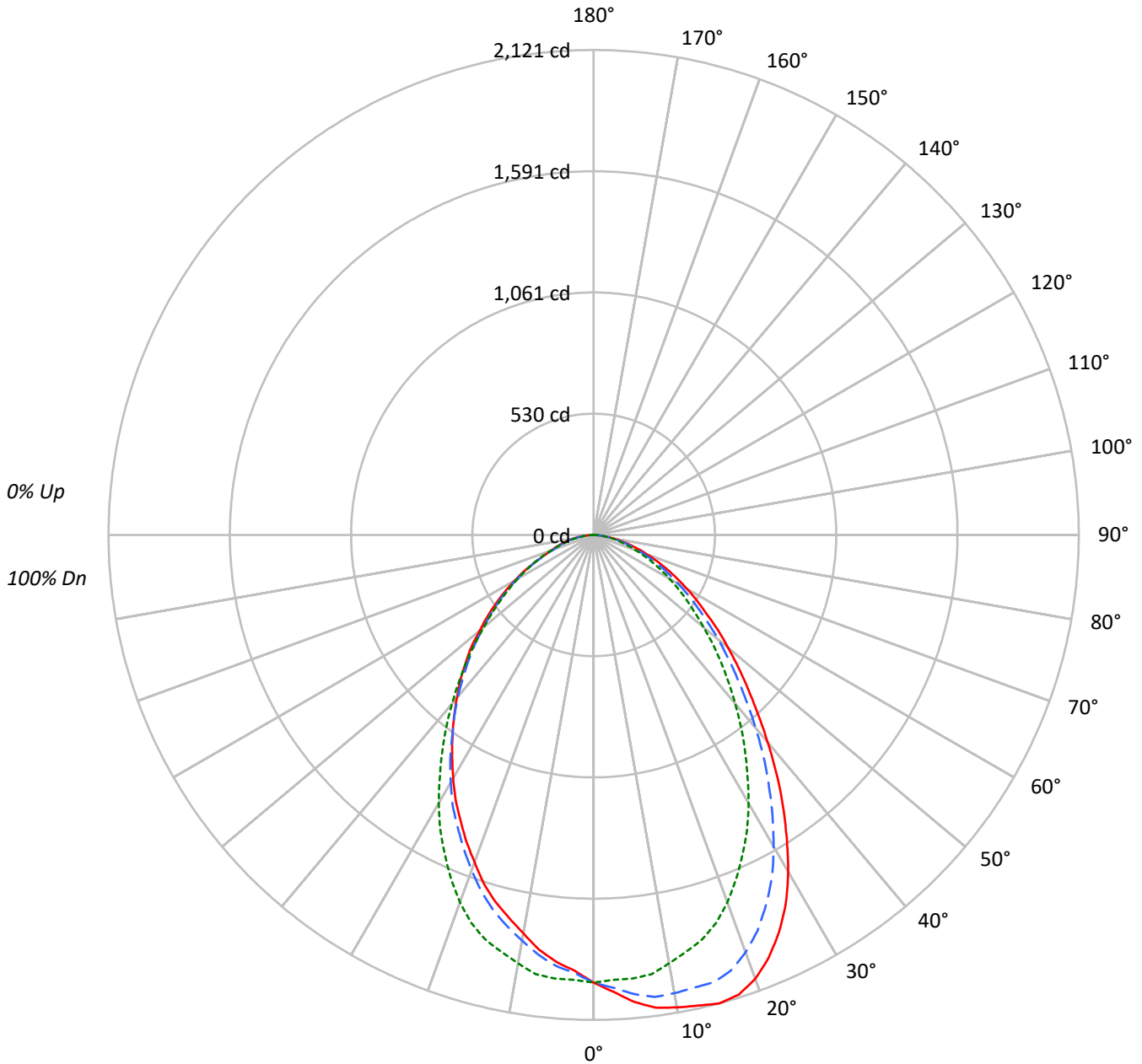
Lumens per Lamp: N/A  
Luminaire Lumens: 3796.5 lumens  
Efficiency: N/A  
Efficacy: 92.6 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.07 / 1.15  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

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°	241461	241461	241461
5°	253886	241133	232107
10°	262809	238260	221590
15°	270832	233928	212117
20°	271147	224313	199898
25°	260952	209657	187419
30°	242297	192918	175015
35°	217193	173676	161946
40°	190579	154978	149713
45°	166570	137212	138067
50°	147066	120067	124423
55°	129695	106448	111846
60°	115920	94211	97961
65°	102677	82859	82859
70°	89691	70721	70721
75°	76680	59905	67054
80°	60661	53558	60661
85°	39202	46137	56892



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	185.5	4.9
10°-20°	522.3	13.8
20°-30°	731.7	19.3
30°-40°	753.9	19.9
40°-50°	641.8	16.9
50°-60°	475.5	12.5
60°-70°	298.4	7.9
70°-80°	148.3	3.9
80°-90°	38.9	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°	1439.5	37.9
0°-40°	2193.4	57.8
0°-60°	3310.8	87.2
0°-90°	3796.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3796.5	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1958	1958	1958	1958	1958	
5°	2050	2015	1948	1892	1875	197
15°	2121	2025	1832	1699	1661	596
25°	1917	1784	1540	1407	1377	877
35°	1442	1334	1153	1078	1076	899
45°	955	890	787	772	792	741
55°	603	555	495	505	520	545
65°	352	317	284	279	284	351
75°	161	143	126	136	141	172
85°	28	28	33	38	40	36
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°	1957.6	1957.6	1957.6	1957.6	1957.6	1957.6	1957.6	1957.6	1957.6
2.5°	2000.3	1992.8	1982.7	1965.1	1947.5	1932.5	1917.4	1909.8	1907.4
5°	2050.5	2035.5	2015.3	1982.7	1947.5	1917.4	1892.2	1879.7	1874.6
7.5°	2085.7	2070.7	2038.0	1987.8	1937.5	1892.2	1852.0	1834.4	1829.5
10°	2098.3	2080.7	2035.5	1967.7	1902.3	1847.1	1801.8	1779.1	1769.2
12.5°	2108.4	2085.7	2028.0	1947.5	1867.1	1799.3	1751.6	1721.4	1713.8
15°	2120.9	2095.8	2025.4	1927.4	1831.9	1751.6	1698.8	1671.1	1661.1
17.5°	2108.4	2080.7	1997.8	1887.2	1779.1	1691.3	1633.4	1608.3	1598.2
20°	2065.7	2035.5	1942.5	1824.4	1708.9	1618.4	1560.5	1535.4	1522.9
22.5°	2000.3	1967.7	1872.2	1746.5	1628.4	1540.5	1485.1	1460.0	1452.5
25°	1917.4	1884.7	1784.2	1656.1	1540.5	1454.9	1407.3	1384.7	1377.1
27.5°	1819.4	1786.6	1688.7	1563.0	1452.5	1372.1	1334.3	1311.8	1306.7
30°	1701.2	1668.6	1573.1	1457.5	1354.5	1279.1	1248.9	1231.3	1228.8
32.5°	1570.6	1542.9	1454.9	1349.5	1251.5	1188.6	1166.0	1153.4	1150.9
35°	1442.4	1412.2	1334.3	1238.9	1153.4	1098.1	1078.1	1075.5	1075.5
37.5°	1311.8	1281.6	1218.8	1130.9	1058.0	1007.7	1000.2	1002.6	1002.6
40°	1183.6	1156.0	1100.7	1027.8	962.5	924.7	922.2	927.3	929.8
42.5°	1062.9	1040.4	990.1	927.3	872.0	841.9	844.3	854.4	861.9
45°	954.9	934.8	889.6	834.2	786.6	764.0	771.5	784.0	791.5
47.5°	856.9	839.3	796.6	746.4	706.1	691.1	701.1	716.2	726.3
50°	766.4	751.4	711.2	658.4	625.7	615.7	628.2	643.3	648.4
52.5°	686.1	670.9	628.2	583.0	557.9	552.9	565.4	578.0	585.5
55°	603.1	590.5	555.3	515.1	495.0	492.6	505.1	515.1	520.1
57.5°	535.3	522.7	490.0	454.8	437.3	434.7	447.3	454.8	457.4
60°	469.9	457.4	427.2	394.5	381.9	381.9	389.5	394.5	397.1
62.5°	409.6	397.1	369.4	341.8	331.7	331.7	331.7	334.2	341.8
65°	351.8	341.8	316.7	291.5	283.9	278.9	278.9	278.9	283.9
67.5°	299.1	289.0	268.9	246.3	238.8	231.2	228.7	233.7	233.7
70°	248.7	241.2	221.2	203.6	196.1	188.4	186.0	196.1	196.1
72.5°	203.6	196.1	183.4	165.9	158.3	155.8	160.9	165.9	168.4
75°	160.9	153.2	143.3	133.2	125.7	128.1	135.8	138.2	140.7
77.5°	120.6	118.2	108.1	100.6	100.6	103.0	108.1	113.1	115.6
80°	85.4	83.0	77.9	72.9	75.4	80.4	83.0	88.0	85.4
82.5°	52.8	52.8	50.2	50.2	52.8	57.8	60.3	62.8	65.4
85°	27.7	27.7	27.7	30.2	32.6	35.2	37.7	40.2	40.2
87.5°	7.5	10.1	10.1	12.6	15.1	15.1	17.6	17.6	17.6
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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