

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: P580650

Luminaire Tested: **HCC4W40D010BZ-HM43040930-41WWWB**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P580650  
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-HM43040930-41WWWB  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, BLACK BAFFLE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT  
CYLINDER  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

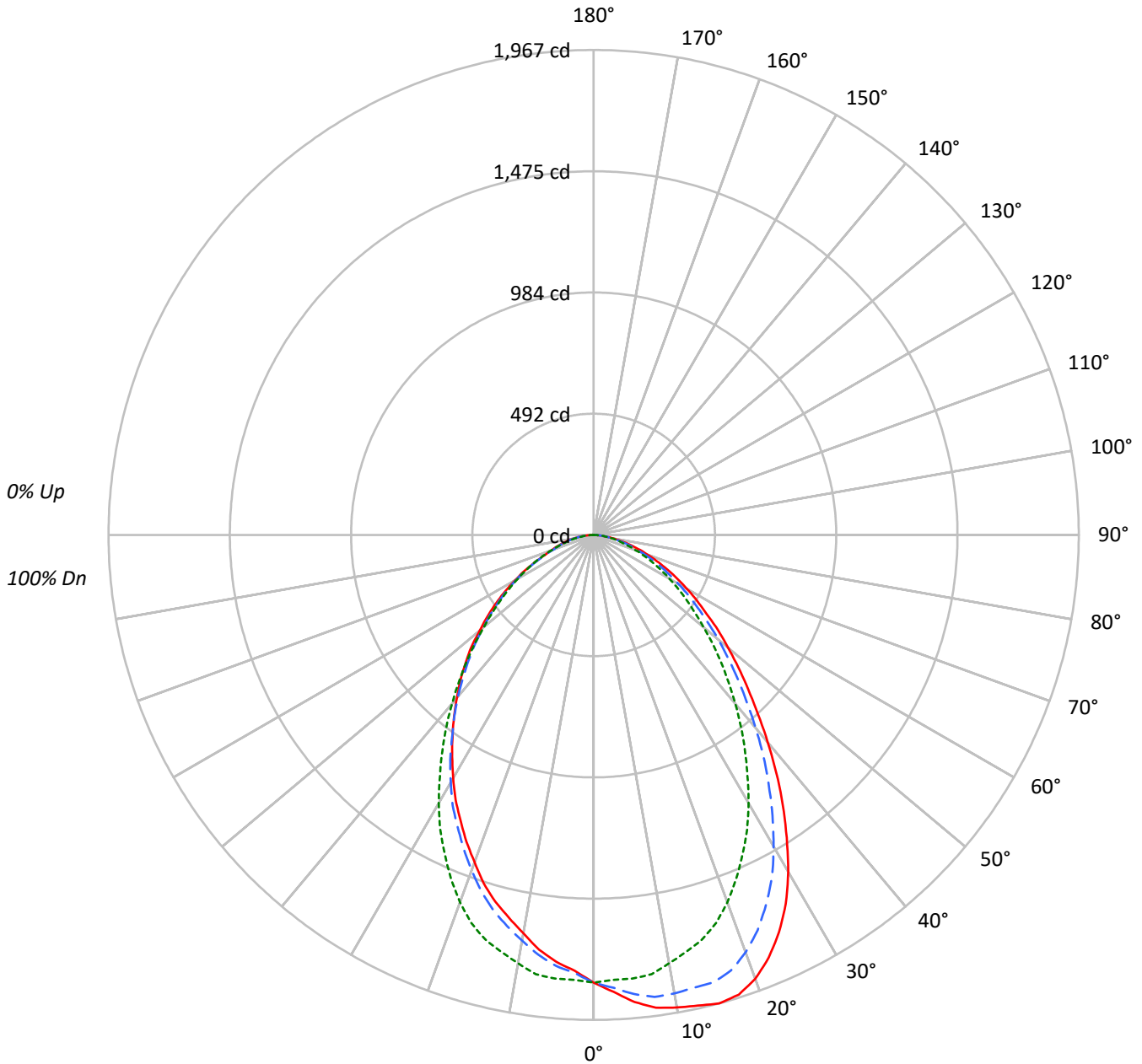
Lumens per Lamp: N/A  
Luminaire Lumens: 3520.9 lumens  
Efficiency: N/A  
Efficacy: 85.9 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.07 / 1.15  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

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										
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°	223934	223934	223934
5°	235475	223638	215268
10°	243746	220963	205495
15°	251180	216957	196717
20°	251458	208024	185381
25°	242007	194428	173823
30°	224722	178917	162310
35°	201427	161087	150201
40°	176748	143739	138844
45°	154481	127234	128054
50°	136397	111355	115384
55°	120297	98749	103760
60°	107508	87378	90832
65°	95234	76847	76847
70°	83199	65564	65564
75°	71104	55521	62193
80°	56328	49722	56328
85°	36371	42882	52788



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	172.0	4.9
10°-20°	484.4	13.8
20°-30°	678.6	19.3
30°-40°	699.2	19.9
40°-50°	595.2	16.9
50°-60°	441.0	12.5
60°-70°	276.8	7.9
70°-80°	137.5	3.9
80°-90°	36.1	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°	1335.0	37.9
0°-40°	2034.2	57.8
0°-60°	3070.5	87.2
0°-90°	3520.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3520.9	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1816	1816	1816	1816	1816	
5°	1902	1869	1806	1755	1739	183
15°	1967	1878	1699	1576	1540	553
25°	1778	1655	1429	1305	1277	813
35°	1338	1238	1070	1000	998	834
45°	886	825	729	716	734	687
55°	559	515	459	468	482	506
65°	326	294	263	259	263	325
75°	149	133	116	126	130	159
85°	26	26	30	35	37	33
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°	1815.5	1815.5	1815.5	1815.5	1815.5	1815.5	1815.5	1815.5	1815.5
2.5°	1855.1	1848.1	1838.8	1822.5	1806.2	1792.1	1778.2	1771.2	1768.9
5°	1901.8	1887.8	1869.2	1838.8	1806.2	1778.2	1754.9	1743.3	1738.6
7.5°	1934.4	1920.4	1890.1	1843.5	1796.9	1754.9	1717.6	1701.3	1696.6
10°	1946.1	1929.7	1887.8	1824.9	1764.2	1713.0	1671.0	1650.0	1640.7
12.5°	1955.4	1934.4	1880.7	1806.2	1731.6	1668.7	1624.4	1596.4	1589.5
15°	1967.0	1943.7	1878.5	1787.5	1699.0	1624.4	1575.5	1549.8	1540.5
17.5°	1955.4	1929.7	1852.8	1750.2	1650.0	1568.5	1514.8	1491.6	1482.2
20°	1915.7	1887.8	1801.6	1691.9	1584.8	1500.9	1447.3	1424.0	1412.3
22.5°	1855.1	1824.9	1736.2	1619.7	1510.2	1428.6	1377.4	1354.1	1347.1
25°	1778.2	1747.9	1654.7	1535.9	1428.6	1349.3	1305.1	1284.1	1277.2
27.5°	1687.3	1657.1	1566.1	1449.6	1347.1	1272.4	1237.5	1216.5	1211.9
30°	1577.8	1547.5	1458.9	1351.7	1256.2	1186.2	1158.3	1142.0	1139.6
32.5°	1456.6	1431.0	1349.3	1251.5	1160.6	1102.4	1081.4	1069.8	1067.4
35°	1337.7	1309.8	1237.5	1148.9	1069.8	1018.4	999.8	997.5	997.5
37.5°	1216.5	1188.6	1130.3	1048.7	981.2	934.6	927.5	929.9	929.9
40°	1097.7	1072.0	1020.8	953.2	892.7	857.7	855.3	859.9	862.3
42.5°	985.8	964.8	918.2	859.9	808.7	780.8	783.0	792.4	799.4
45°	885.6	867.0	825.1	773.7	729.4	708.5	715.5	727.1	734.1
47.5°	794.7	778.4	738.7	692.2	654.9	640.9	650.2	664.2	673.5
50°	710.8	696.8	659.6	610.6	580.3	571.0	582.6	596.6	601.3
52.5°	636.3	622.3	582.6	540.7	517.3	512.7	524.4	536.1	543.0
55°	559.4	547.7	515.1	477.8	459.2	456.8	468.5	477.8	482.5
57.5°	496.4	484.7	454.5	421.8	405.5	403.2	414.9	421.8	424.2
60°	435.8	424.2	396.2	365.9	354.2	354.2	361.2	365.9	368.2
62.5°	379.9	368.2	342.6	316.9	307.6	307.6	307.6	310.0	316.9
65°	326.3	316.9	293.7	270.4	263.3	258.7	258.7	258.7	263.3
67.5°	277.3	268.0	249.4	228.3	221.4	214.4	212.1	216.7	216.7
70°	230.7	223.8	205.1	188.8	181.8	174.8	172.4	181.8	181.8
72.5°	188.8	181.8	170.2	153.8	146.9	144.5	149.2	153.8	156.2
75°	149.2	142.1	132.8	123.5	116.5	118.8	125.9	128.1	130.5
77.5°	111.9	109.5	100.2	93.3	93.3	95.5	100.2	104.9	107.2
80°	79.3	76.9	72.2	67.6	70.0	74.5	76.9	81.6	79.3
82.5°	49.0	49.0	46.6	46.6	49.0	53.6	55.9	58.3	60.6
85°	25.7	25.7	25.7	27.9	30.3	32.6	35.0	37.3	37.3
87.5°	7.0	9.3	9.3	11.7	14.0	14.0	16.4	16.4	16.4
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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