

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: P580557

Luminaire Tested: **HCC4S40D010BZ-HM43040827-41RWWH**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P580557  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-15)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/9/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HCC4S40D010BZ-HM43040827-41RWWH  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, HAZE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT  
CYLINDER  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

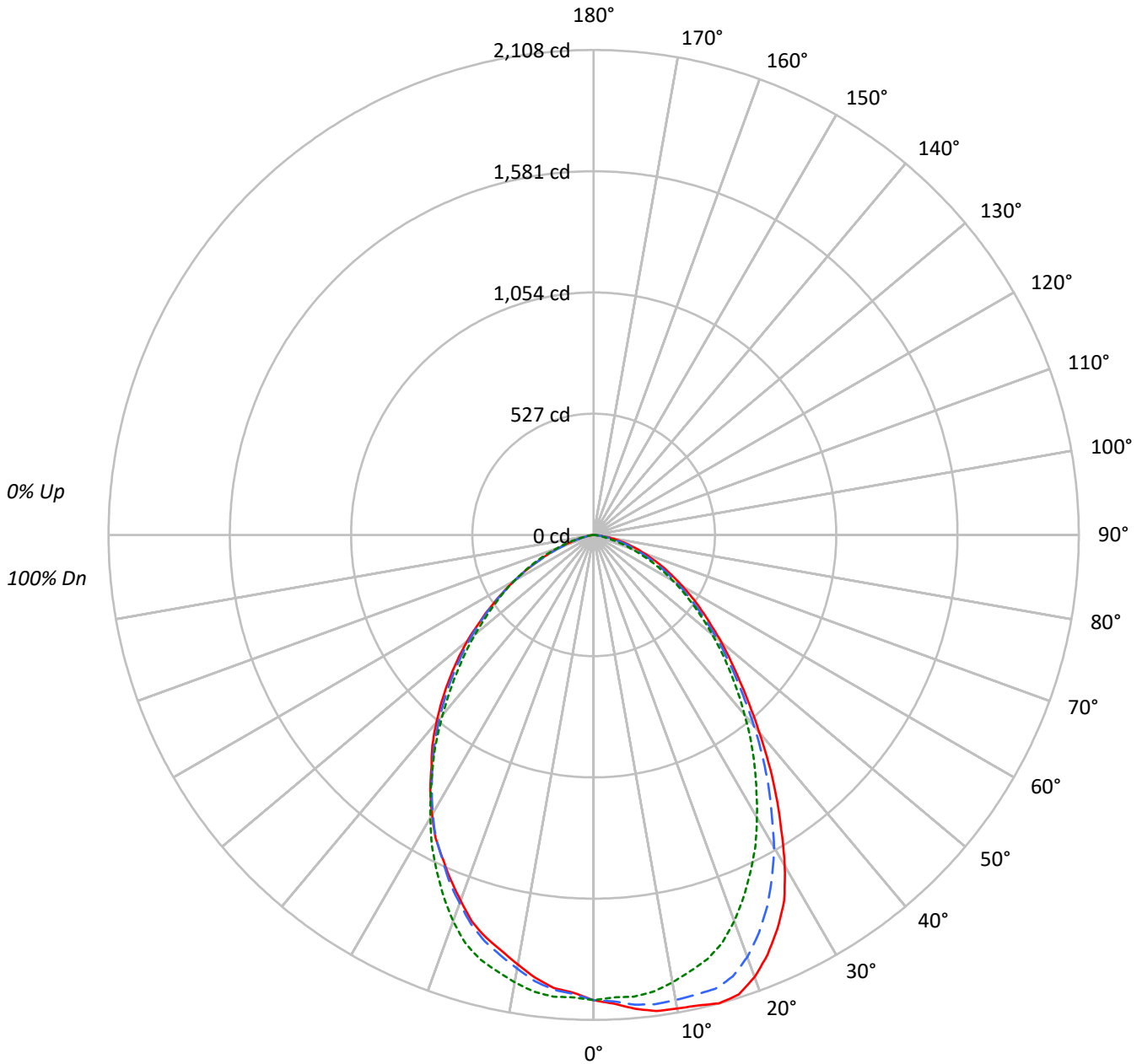
Lumens per Lamp: N/A  
Luminaire Lumens: 3854.2 lumens  
Efficiency: N/A  
Efficacy: 94.0 lumens/watt  
Spacing Criteria (0/90/45): 1.14 / 1.08 / 1.16  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

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									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	104	100	108	105	102	99	101	98	96	97	95	93	93	92	90	88																			
2	103	96	90	85	100	94	89	84	90	86	82	87	84	80	84	81	79	77																			
3	95	86	79	73	92	84	78	73	81	76	71	79	74	70	76	72	69	67																			
4	88	77	70	64	86	76	69	63	74	67	62	71	66	62	69	65	61	59																			
5	81	70	62	56	79	69	61	56	67	60	55	65	59	55	63	58	54	52																			
6	76	64	56	50	74	63	55	50	61	54	49	60	54	49	58	53	49	47																			
7	71	58	51	45	69	58	50	45	56	49	45	55	49	44	54	48	44	42																			
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38																			
9	62	50	42	37	61	49	42	37	48	41	37	47	41	37	46	41	37	35																			
10	58	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32																			

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

	0°	90°	180°
0°	249430	249430	249430
5°	255966	249429	244773
10°	261769	247291	237534
15°	269134	243786	231272
20°	268391	234433	221911
25°	257087	219483	211277
30°	236486	202147	199996
35°	208037	183448	184969
40°	180000	164221	171096
45°	156435	145917	154673
50°	138834	128702	137375
55°	123157	112899	117759
60°	109679	97912	97912
65°	97511	81371	76234
70°	84245	61597	54348
75°	70628	40699	33503
80°	53487	19605	17829
85°	28446	7076	7076



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	191.5	5.0
10°-20°	542.9	14.1
20°-30°	765.6	19.9
30°-40°	791.0	20.5
40°-50°	670.5	17.4
50°-60°	487.8	12.7
60°-70°	285.0	7.4
70°-80°	105.9	2.7
80°-90°	13.9	0.4
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°	1500.1	38.9
0°-40°	2291.0	59.4
0°-60°	3449.4	89.5
0°-90°	3854.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3854.2	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	2022	2022	2022	2022	2022	
5°	2067	2050	2014	1984	1977	198
15°	2108	2042	1909	1829	1811	592
25°	1889	1784	1613	1555	1552	864
35°	1382	1321	1218	1221	1228	863
45°	897	872	836	867	887	698
55°	573	545	525	543	548	515
65°	334	306	279	261	261	332
75°	148	123	85	68	70	159
85°	20	13	5	5	5	28
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°	2022.2	2022.2	2022.2	2022.2	2022.2	2022.2	2022.2	2022.2	2022.2
2.5°	2039.7	2034.7	2029.7	2022.2	2012.1	2004.6	1997.1	1992.0	1992.0
5°	2067.3	2059.8	2049.7	2032.1	2014.5	1999.5	1984.5	1976.9	1976.9
7.5°	2087.4	2077.4	2057.3	2032.1	2002.0	1979.5	1956.8	1946.7	1941.8
10°	2090.0	2079.9	2052.3	2014.5	1974.4	1939.2	1914.1	1899.1	1896.5
12.5°	2094.9	2082.4	2047.3	1994.5	1941.8	1899.1	1871.4	1856.4	1851.3
15°	2107.6	2090.0	2042.2	1974.4	1909.1	1858.8	1828.7	1816.1	1811.1
17.5°	2094.9	2069.8	2012.1	1931.7	1858.8	1803.6	1773.4	1760.9	1760.9
20°	2044.7	2019.6	1951.8	1863.9	1786.0	1733.3	1703.1	1695.6	1690.6
22.5°	1974.4	1946.7	1874.0	1780.9	1703.1	1655.4	1635.3	1625.2	1622.8
25°	1889.0	1861.3	1783.5	1688.0	1612.7	1572.5	1554.9	1554.9	1552.4
27.5°	1793.5	1758.4	1678.0	1595.1	1522.2	1492.1	1484.5	1484.5	1487.1
30°	1660.4	1635.3	1567.5	1487.1	1419.3	1399.1	1399.1	1404.2	1404.2
32.5°	1517.3	1499.7	1439.4	1369.0	1316.3	1303.7	1308.8	1318.7	1321.3
35°	1381.6	1361.5	1321.3	1258.5	1218.3	1213.3	1220.8	1228.4	1228.4
37.5°	1248.5	1228.4	1200.7	1150.5	1120.3	1122.8	1132.9	1143.0	1150.5
40°	1117.9	1102.7	1082.7	1042.4	1019.9	1029.9	1042.4	1052.5	1062.6
42.5°	1002.3	987.2	972.1	942.0	927.0	939.5	954.5	964.6	974.6
45°	896.8	886.7	871.7	846.6	836.5	849.0	866.6	876.6	886.7
47.5°	806.3	801.3	781.2	758.6	753.5	766.2	781.2	793.8	801.3
50°	723.5	715.9	698.3	675.7	670.7	690.8	700.8	708.4	715.9
52.5°	643.1	635.5	615.4	595.4	595.4	610.4	617.9	620.5	628.0
55°	572.7	565.2	545.1	530.0	525.0	537.5	542.6	542.6	547.6
57.5°	507.4	499.9	479.8	462.2	459.7	467.2	467.2	467.2	469.7
60°	444.6	437.1	417.0	401.9	396.9	399.4	396.9	394.4	396.9
62.5°	386.9	379.3	359.2	341.7	336.6	336.6	329.0	326.5	329.0
65°	334.1	321.5	306.5	288.9	278.8	271.3	261.2	261.2	261.2
67.5°	281.4	271.3	253.7	236.1	223.5	211.0	196.0	201.0	203.5
70°	233.6	226.1	205.9	188.4	170.8	155.7	143.2	148.2	150.7
72.5°	190.9	180.8	163.3	143.2	128.1	108.1	100.4	105.5	105.5
75°	148.2	138.1	123.1	103.0	85.4	67.8	67.8	70.3	70.3
77.5°	110.5	100.4	85.4	67.8	52.8	40.2	42.7	42.7	42.7
80°	75.3	67.8	55.3	40.2	27.6	22.6	22.6	22.6	25.1
82.5°	42.7	37.7	30.2	20.1	12.6	12.6	12.6	12.6	12.6
85°	20.1	15.0	12.6	7.5	5.0	5.0	5.0	5.0	5.0
87.5°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
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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