

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: P580629

Luminaire Tested: **HCC4S40D010BZ-HM43040927-41RWWH**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P580629  
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-HM43040927-41RWWH  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, HAZE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT  
CYLINDER  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

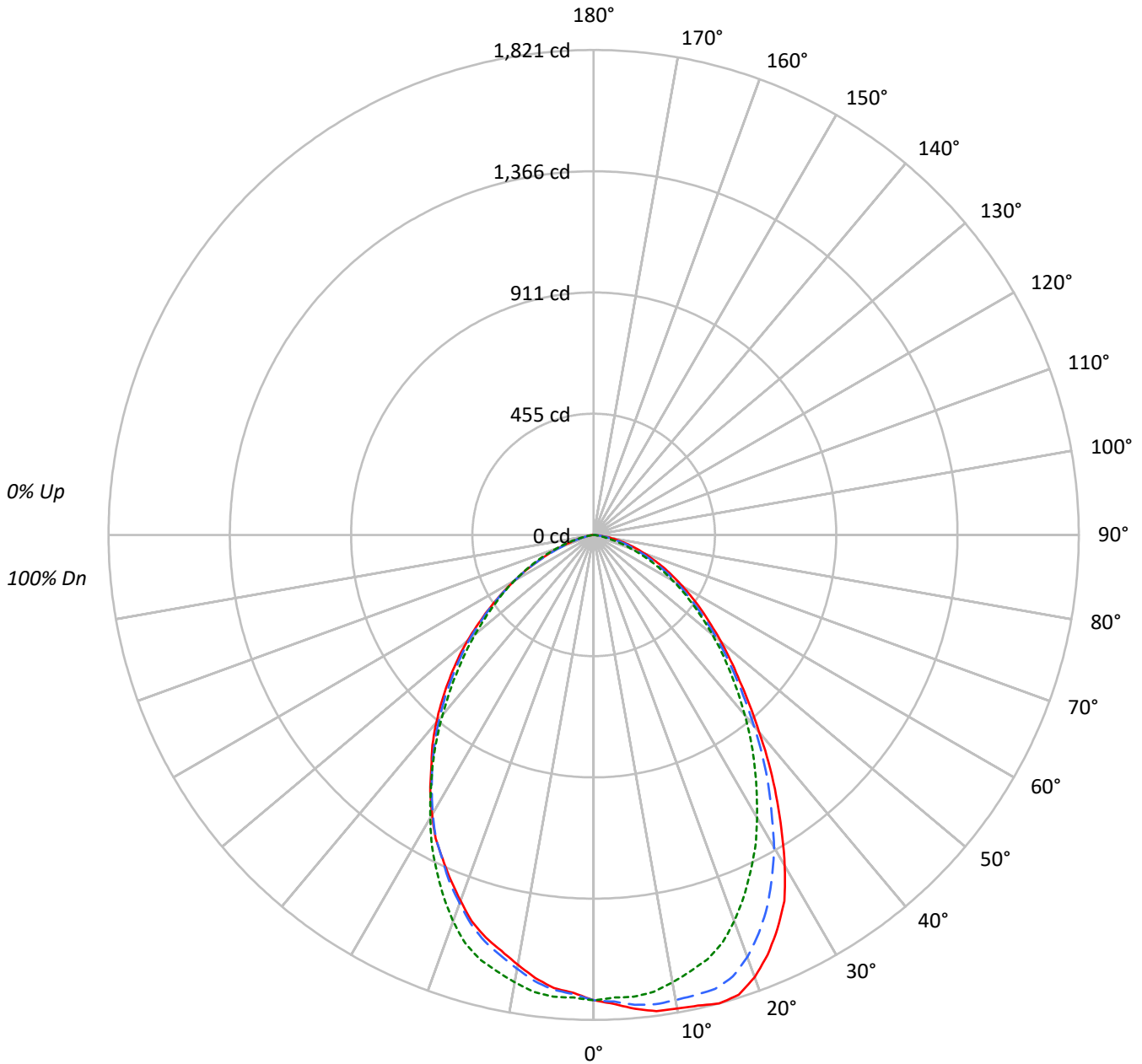
Lumens per Lamp: N/A  
Luminaire Lumens: 3330.5 lumens  
Efficiency: N/A  
Efficacy: 81.2 lumens/watt  
Spacing Criteria (0/90/45): 1.14 / 1.08 / 1.16  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

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				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	100	100	100
1	111	107	104	100	108	105	102	99	101	98	96	97	95	93	93	92	90	88	88	88	88
2	103	96	90	85	100	94	89	84	90	86	82	87	84	80	84	81	79	77	77	77	77
3	95	86	79	73	92	84	78	73	81	76	71	79	74	70	76	72	69	67	67	67	67
4	88	77	70	64	86	76	69	63	74	67	62	71	66	62	69	65	61	59	59	59	59
5	81	70	62	56	79	69	61	56	67	60	55	65	59	55	63	58	54	52	52	52	52
6	76	64	56	50	74	63	55	50	61	54	49	60	54	49	58	53	49	47	47	47	47
7	71	58	51	45	69	58	50	45	56	49	45	55	49	44	54	48	44	42	42	42	42
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38	38	38	38
9	62	50	42	37	61	49	42	37	48	41	37	47	41	37	46	41	37	35	35	35	35
10	58	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32	32	32	32

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

	0°	90°	180°
0°	215534	215534	215534
5°	221186	215540	211516
10°	226186	213699	205257
15°	232561	210661	199845
20°	231926	202576	191760
25°	222151	189651	182574
30°	204355	174673	172821
35°	179774	158513	159838
40°	155542	141904	147845
45°	135171	126083	133654
50°	119971	111220	118723
55°	106427	97567	101760
60°	94779	84590	84590
65°	84260	70309	65902
70°	72813	53230	46991
75°	61001	35171	28976
80°	46242	16977	15414
85°	24625	6227	6227



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	165.5	5.0
10°-20°	469.1	14.1
20°-30°	661.6	19.9
30°-40°	683.5	20.5
40°-50°	579.4	17.4
50°-60°	421.6	12.7
60°-70°	246.3	7.4
70°-80°	91.6	2.7
80°-90°	12.0	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°	1296.2	38.9
0°-40°	1979.7	59.4
0°-60°	2980.7	89.5
0°-90°	3330.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3330.5	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1747	1747	1747	1747	1747	
5°	1786	1771	1741	1715	1708	171
15°	1821	1765	1650	1580	1565	512
25°	1632	1541	1394	1344	1342	747
35°	1194	1142	1053	1055	1062	746
45°	775	753	723	749	766	603
55°	495	471	454	469	473	445
65°	289	265	241	226	226	286
75°	128	106	74	59	61	138
85°	17	11	4	4	4	24
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°	1747.4	1747.4	1747.4	1747.4	1747.4	1747.4	1747.4	1747.4	1747.4
2.5°	1762.5	1758.2	1753.9	1747.4	1738.7	1732.2	1725.7	1721.3	1721.3
5°	1786.4	1779.9	1771.3	1756.0	1740.8	1727.8	1714.8	1708.3	1708.3
7.5°	1803.8	1795.2	1777.8	1756.0	1730.0	1710.4	1690.9	1682.3	1677.9
10°	1805.9	1797.3	1773.4	1740.8	1706.2	1675.8	1654.0	1641.0	1638.8
12.5°	1810.3	1799.4	1769.1	1723.5	1677.9	1641.0	1617.2	1604.2	1599.8
15°	1821.2	1805.9	1764.7	1706.2	1649.7	1606.3	1580.3	1569.4	1565.0
17.5°	1810.3	1788.6	1738.7	1669.2	1606.3	1558.5	1532.5	1521.6	1521.6
20°	1766.9	1745.2	1686.5	1610.7	1543.3	1497.8	1471.6	1465.1	1460.9
22.5°	1706.2	1682.3	1619.3	1539.0	1471.6	1430.4	1413.1	1404.4	1402.3
25°	1632.3	1608.4	1541.2	1458.6	1393.5	1358.9	1343.6	1343.6	1341.5
27.5°	1549.8	1519.4	1450.0	1378.4	1315.4	1289.4	1282.9	1282.9	1285.0
30°	1434.8	1413.1	1354.5	1285.0	1226.4	1209.0	1209.0	1213.4	1213.4
32.5°	1311.1	1295.9	1243.7	1183.0	1137.4	1126.6	1130.9	1139.6	1141.7
35°	1193.9	1176.5	1141.7	1087.5	1052.7	1048.5	1055.0	1061.5	1061.5
37.5°	1078.9	1061.5	1037.6	994.1	968.1	970.2	979.0	987.6	994.1
40°	966.0	953.0	935.6	900.8	881.3	890.0	900.8	909.5	918.2
42.5°	866.1	853.1	840.1	814.0	801.0	811.8	824.8	833.6	842.2
45°	774.9	766.2	753.2	731.5	722.8	733.7	748.8	757.6	766.2
47.5°	696.8	692.4	675.1	655.6	651.2	662.1	675.1	685.9	692.4
50°	625.2	618.7	603.4	583.9	579.6	596.9	605.6	612.1	618.7
52.5°	555.7	549.2	531.8	514.4	514.4	527.4	533.9	536.2	542.7
55°	494.9	488.4	471.0	458.0	453.7	464.5	468.8	468.8	473.2
57.5°	438.4	431.9	414.5	399.4	397.3	403.8	403.8	403.8	405.9
60°	384.2	377.7	360.3	347.3	342.9	345.2	342.9	340.8	342.9
62.5°	334.3	327.8	310.4	295.2	290.9	290.9	284.4	282.2	284.4
65°	288.7	277.9	264.8	249.6	240.9	234.4	225.8	225.8	225.8
67.5°	243.1	234.4	219.3	204.0	193.1	182.4	169.3	173.6	175.8
70°	201.9	195.4	178.0	162.8	147.6	134.6	123.8	128.0	130.3
72.5°	165.0	156.3	141.1	123.8	110.8	93.4	86.9	91.1	91.1
75°	128.0	119.4	106.4	89.0	73.8	58.6	58.6	60.8	60.8
77.5°	95.5	86.9	73.8	58.6	45.6	34.8	36.9	36.9	36.9
80°	65.1	58.6	47.8	34.8	23.9	19.5	19.5	19.5	21.7
82.5°	36.9	32.5	26.0	17.4	10.9	10.9	10.9	10.9	10.9
85°	17.4	13.0	10.9	6.5	4.4	4.4	4.4	4.4	4.4
87.5°	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
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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