

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: P580632

Luminaire Tested: **HCC4S40D010MB-HM43040927-41WWWB**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P580632  
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: HCC4S40D010MB-HM43040927-41WWWB  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, BLACK BAFFLE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT  
CYLINDER  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

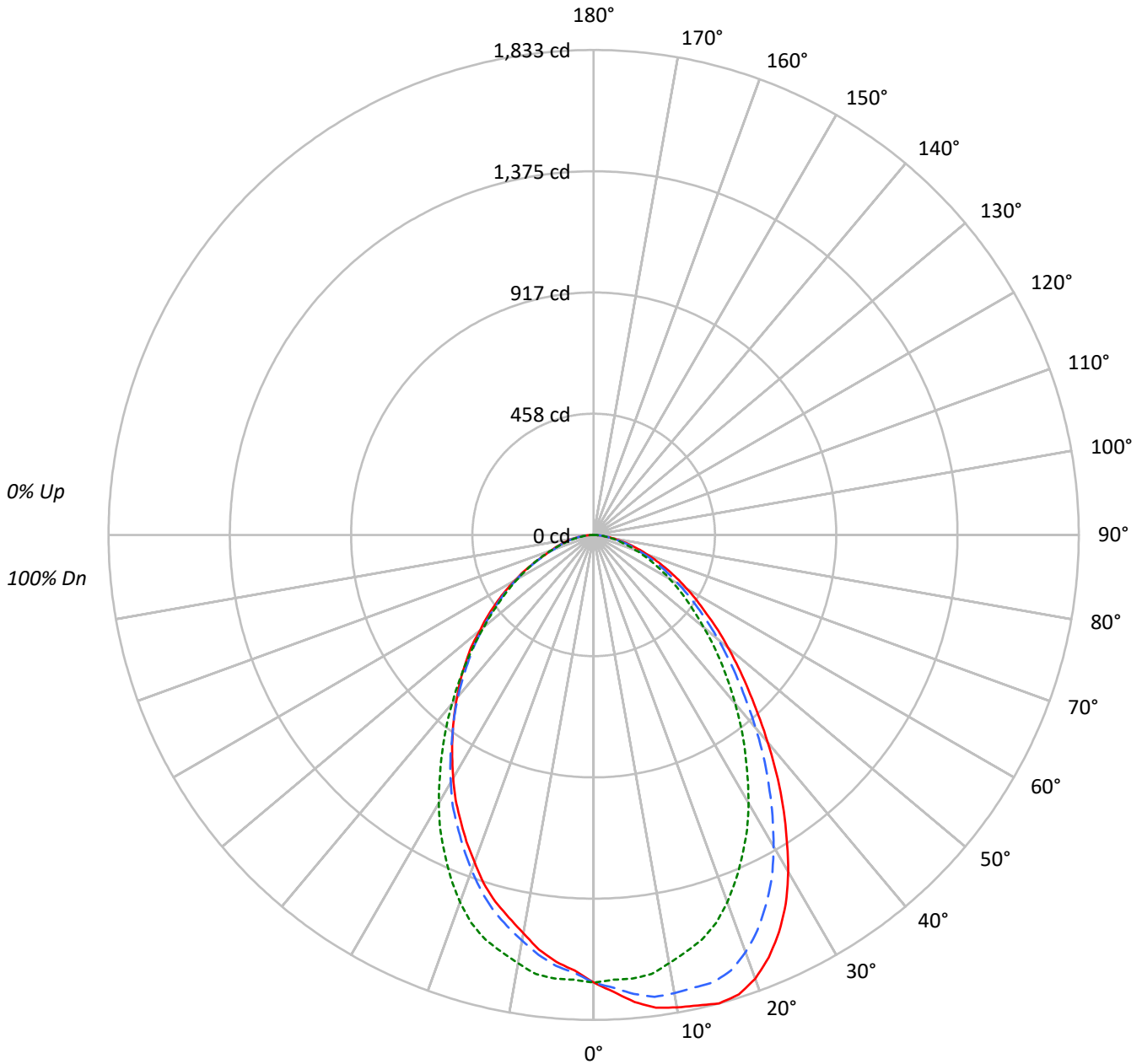
Lumens per Lamp: N/A  
Luminaire Lumens: 3280.6 lumens  
Efficiency: N/A  
Efficacy: 80.0 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.07 / 1.15  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

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°	208651	208651	208651
5°	219403	208384	200583
10°	227100	205883	191467
15°	234030	202144	183283
20°	234302	193821	172727
25°	225485	181159	161942
30°	209382	166697	151229
35°	187679	150080	139946
40°	164687	133917	129360
45°	143945	118565	119315
50°	127090	103756	107517
55°	112082	91997	96663
60°	100157	81408	84640
65°	88726	71623	71623
70°	77537	61092	61092
75°	66243	51756	57951
80°	52493	46242	52493
85°	33824	39910	49250



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	160.3	4.9
10°-20°	451.3	13.8
20°-30°	632.3	19.3
30°-40°	651.4	19.9
40°-50°	554.6	16.9
50°-60°	410.9	12.5
60°-70°	257.9	7.9
70°-80°	128.1	3.9
80°-90°	33.6	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°	1243.9	37.9
0°-40°	1895.4	57.8
0°-60°	2860.9	87.2
0°-90°	3280.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3280.6	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1692	1692	1692	1692	1692	
5°	1772	1742	1683	1635	1620	170
15°	1833	1750	1583	1468	1435	515
25°	1657	1542	1331	1216	1190	758
35°	1246	1153	997	932	929	777
45°	825	769	680	667	684	640
55°	521	480	428	436	450	471
65°	304	274	245	241	245	303
75°	139	124	109	117	122	149
85°	24	24	28	33	35	31
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°	1691.6	1691.6	1691.6	1691.6	1691.6	1691.6	1691.6	1691.6	1691.6
2.5°	1728.5	1722.0	1713.3	1698.1	1683.0	1669.8	1656.8	1650.3	1648.2
5°	1772.0	1759.0	1741.6	1713.3	1683.0	1656.8	1635.1	1624.3	1620.0
7.5°	1802.3	1789.3	1761.1	1717.6	1674.2	1635.1	1600.3	1585.2	1580.8
10°	1813.2	1798.0	1759.0	1700.3	1643.8	1596.1	1557.0	1537.5	1528.7
12.5°	1821.8	1802.3	1752.3	1683.0	1613.5	1554.8	1513.6	1487.5	1481.0
15°	1832.7	1811.0	1750.2	1665.6	1583.0	1513.6	1467.9	1444.1	1435.3
17.5°	1821.8	1798.0	1726.3	1630.8	1537.5	1461.4	1411.5	1389.7	1381.1
20°	1785.0	1759.0	1678.6	1576.5	1476.6	1398.4	1348.5	1326.8	1315.9
22.5°	1728.5	1700.3	1617.7	1509.2	1407.1	1331.1	1283.3	1261.7	1255.1
25°	1656.8	1628.6	1541.7	1431.1	1331.1	1257.3	1216.1	1196.4	1189.9
27.5°	1572.2	1544.0	1459.2	1350.7	1255.1	1185.7	1153.1	1133.6	1129.2
30°	1470.1	1441.8	1359.3	1259.4	1170.4	1105.3	1079.2	1064.1	1061.8
32.5°	1357.2	1333.3	1257.3	1166.1	1081.4	1027.1	1007.6	996.7	994.6
35°	1246.4	1220.4	1153.1	1070.6	996.7	948.9	931.6	929.4	929.4
37.5°	1133.6	1107.4	1053.2	977.2	914.2	870.8	864.3	866.4	866.4
40°	1022.8	998.9	951.2	888.2	831.7	799.2	796.9	801.3	803.4
42.5°	918.5	899.0	855.5	801.3	753.5	727.4	729.7	738.3	744.8
45°	825.2	807.8	768.7	720.9	679.7	660.2	666.7	677.5	684.0
47.5°	740.5	725.3	688.4	644.9	610.2	597.2	605.9	618.9	627.5
50°	662.3	649.3	614.5	568.9	540.7	532.0	542.9	555.9	560.3
52.5°	592.8	579.8	542.9	503.8	482.0	477.8	488.5	499.4	505.9
55°	521.2	510.3	479.9	445.1	427.8	425.6	436.5	445.1	449.5
57.5°	462.5	451.7	423.4	393.0	377.9	375.6	386.5	393.0	395.3
60°	406.0	395.3	369.1	340.9	330.0	330.0	336.6	340.9	343.1
62.5°	353.9	343.1	319.3	295.3	286.6	286.6	286.6	288.8	295.3
65°	304.0	295.3	273.6	251.9	245.4	241.0	241.0	241.0	245.4
67.5°	258.4	249.8	232.4	212.8	206.3	199.8	197.6	202.0	202.0
70°	215.0	208.5	191.1	175.9	169.4	162.9	160.6	169.4	169.4
72.5°	175.9	169.4	158.5	143.3	136.8	134.6	139.0	143.3	145.5
75°	139.0	132.5	123.8	115.1	108.6	110.8	117.3	119.4	121.6
77.5°	104.3	102.0	93.4	86.9	86.9	89.0	93.4	97.8	99.9
80°	73.9	71.6	67.4	63.0	65.1	69.5	71.6	76.0	73.9
82.5°	45.6	45.6	43.4	43.4	45.6	50.0	52.1	54.3	56.5
85°	23.9	23.9	23.9	26.0	28.2	30.4	32.6	34.8	34.8
87.5°	6.5	8.6	8.6	10.9	13.0	13.0	15.2	15.2	15.2
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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