

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: P580648

Luminaire Tested: **HCC4S40D010MW-HM43040930-41WWBB**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P580648  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-17)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/9/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HCC4S40D010MW-HM43040930-41WWBB  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE BAFFLE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT  
CYLINDER  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

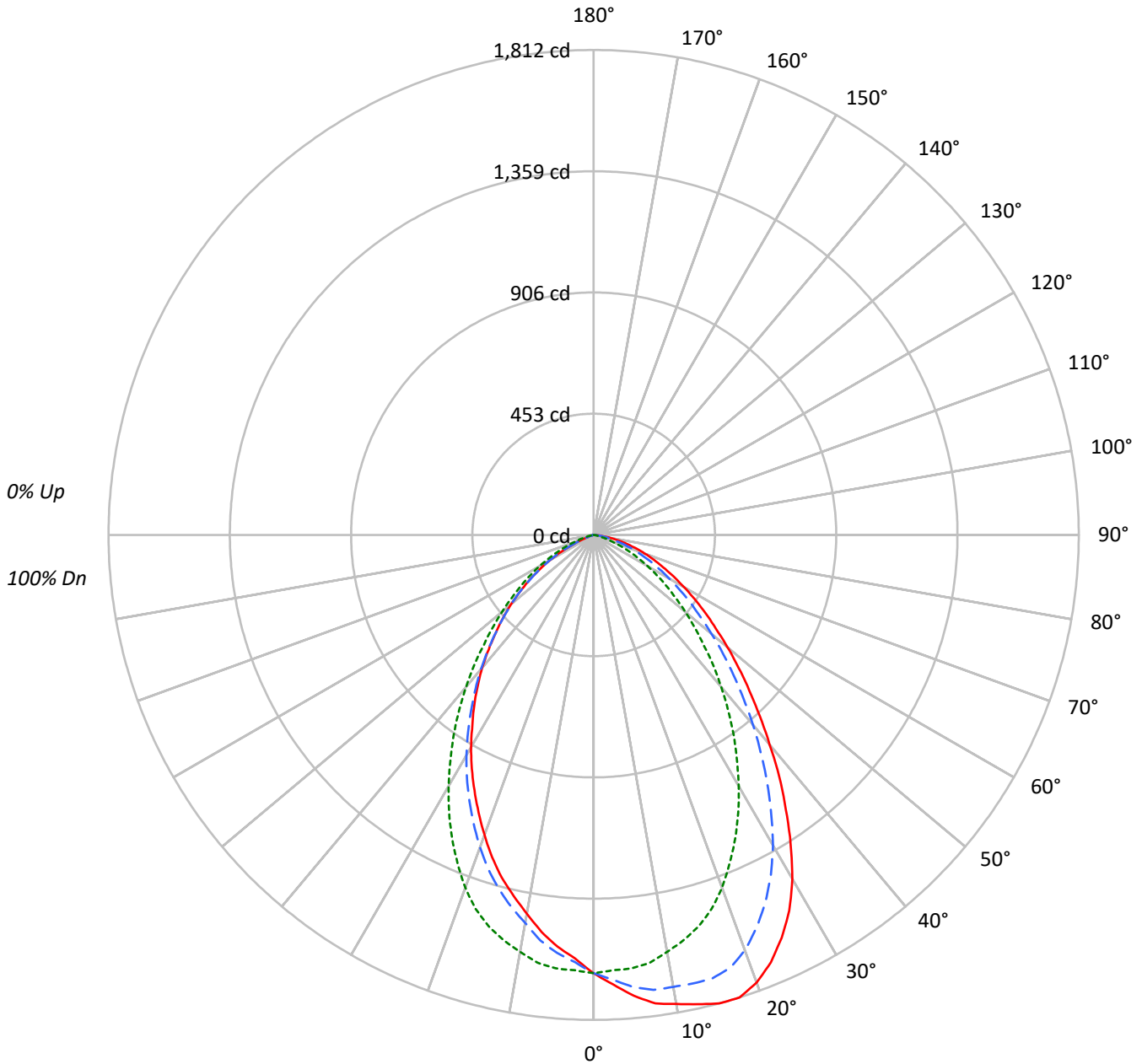
Lumens per Lamp: N/A  
Luminaire Lumens: 2828.9 lumens  
Efficiency: N/A  
Efficacy: 69.0 lumens/watt  
Spacing Criteria (0/90/45): 1.11 / 1.04 / 1.12  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

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	108	104	101	109	105	102	100	101	99	97	97	95	94	94	92	91	89																			
2	103	97	91	87	101	95	90	86	92	87	84	88	85	82	85	83	80	78																			
3	96	87	80	75	94	86	79	74	83	78	73	80	76	72	78	74	71	69																			
4	89	79	72	66	87	78	71	65	75	69	65	73	68	64	71	67	63	61																			
5	83	72	64	58	81	71	64	58	69	62	58	67	61	57	65	60	56	55																			
6	77	66	58	52	75	65	57	52	63	57	52	61	56	51	60	55	51	49																			
7	72	60	53	47	71	59	52	47	58	51	47	57	51	46	55	50	46	44																			
8	68	56	48	43	66	55	48	43	54	47	42	53	47	42	51	46	42	40																			
9	64	52	44	39	62	51	44	39	50	43	39	49	43	39	48	43	39	37																			
10	60	48	41	36	59	47	41	36	46	40	36	46	40	36	45	39	36	34																			

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

	0°	90°	180°
0°	202003	202003	202003
5°	214030	201326	191235
10°	222917	198118	180020
15°	231438	193358	169275
20°	233620	184081	156556
25°	226057	170257	143310
30°	211362	154277	130392
35°	188372	137146	117164
40°	164671	119281	104274
45°	143457	101191	90201
50°	125171	85833	77332
55°	109717	71137	62622
60°	95963	57454	45983
65°	83618	42816	25859
70°	73101	27733	8403
75°	59953	14440	2240
80°	44679	6606	1705
85°	26323	3397	3397



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	154.6	5.5
10°-20°	432.6	15.3
20°-30°	598.1	21.1
30°-40°	601.4	21.3
40°-50°	485.3	17.2
50°-60°	328.2	11.6
60°-70°	167.0	5.9
70°-80°	53.5	1.9
80°-90°	8.2	0.3
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°	1185.3	41.9
0°-40°	1786.7	63.2
0°-60°	2600.2	91.9
0°-90°	2828.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2828.9	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1638	1638	1638	1638	1638	
5°	1729	1696	1626	1568	1544	167
15°	1812	1715	1514	1370	1326	510
25°	1661	1517	1251	1097	1053	760
35°	1251	1130	911	797	778	782
45°	822	736	580	517	517	637
55°	510	440	331	289	291	458
65°	286	233	147	96	89	287
75°	126	89	30	7	5	136
85°	19	9	2	2	2	25
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°	1637.7	1637.7	1637.7	1637.7	1637.7	1637.7	1637.7	1637.7	1637.7
2.5°	1681.9	1672.6	1663.3	1647.0	1628.4	1609.8	1598.1	1588.8	1584.1
5°	1728.6	1716.9	1696.0	1661.0	1626.0	1593.4	1567.8	1551.5	1544.5
7.5°	1765.8	1749.5	1714.6	1665.7	1612.1	1560.8	1528.3	1504.9	1495.6
10°	1779.8	1761.2	1714.6	1649.3	1581.8	1518.8	1472.3	1449.0	1437.3
12.5°	1796.1	1775.1	1716.9	1635.3	1551.5	1476.9	1423.3	1393.1	1381.4
15°	1812.4	1784.4	1714.6	1614.4	1514.2	1428.0	1369.7	1339.5	1325.6
17.5°	1812.4	1779.8	1696.0	1579.5	1465.3	1374.5	1309.2	1274.2	1262.6
20°	1779.8	1742.5	1651.7	1523.6	1402.4	1304.6	1241.6	1206.8	1192.7
22.5°	1728.6	1686.7	1588.8	1456.0	1327.8	1232.3	1169.4	1136.8	1122.9
25°	1661.0	1619.1	1516.6	1379.2	1251.0	1155.5	1097.2	1067.0	1053.0
27.5°	1581.8	1535.2	1432.8	1295.2	1169.4	1078.6	1025.0	997.0	985.4
30°	1484.0	1439.7	1339.5	1204.4	1083.2	999.4	950.5	924.8	915.5
32.5°	1369.7	1332.5	1234.7	1108.9	994.8	917.9	873.6	852.6	843.3
35°	1251.0	1216.1	1129.9	1013.4	910.8	838.6	796.7	782.8	778.1
37.5°	1139.2	1108.9	1025.0	917.9	824.7	761.7	724.5	715.2	710.5
40°	1022.7	1001.7	924.8	827.0	740.8	684.9	654.7	647.6	647.6
42.5°	917.9	894.6	827.0	738.5	661.6	605.7	584.7	577.8	580.1
45°	822.4	799.0	736.2	654.7	580.1	533.5	517.1	517.1	517.1
47.5°	733.8	712.8	654.7	570.7	510.2	472.9	456.6	456.6	458.9
50°	652.3	638.3	573.1	500.9	447.3	412.3	400.6	398.4	403.0
52.5°	575.4	559.2	500.9	435.6	384.4	356.5	344.8	342.5	344.8
55°	510.2	491.6	440.3	377.4	330.8	302.9	288.9	286.5	291.2
57.5°	447.3	433.3	379.7	323.9	279.6	251.6	239.9	235.3	237.7
60°	389.0	375.1	326.1	272.5	232.9	205.0	188.7	184.1	186.4
62.5°	335.5	323.9	277.2	226.0	186.4	160.8	144.4	132.8	137.4
65°	286.5	274.9	232.9	181.7	146.7	118.8	95.5	86.2	88.6
67.5°	244.6	230.6	191.0	144.4	109.5	79.3	53.6	48.9	48.9
70°	202.7	188.7	153.8	111.9	76.9	41.9	23.3	23.3	23.3
72.5°	163.1	151.4	118.8	83.9	48.9	18.6	9.3	9.3	9.3
75°	125.8	116.5	88.6	58.3	30.3	9.3	7.0	4.7	4.7
77.5°	93.2	83.9	62.9	39.6	18.6	4.7	4.7	4.7	4.7
80°	62.9	55.9	41.9	23.3	9.3	2.4	2.4	2.4	2.4
82.5°	37.3	32.6	23.3	11.7	4.7	2.4	2.4	2.4	2.4
85°	18.6	14.0	9.3	4.7	2.4	2.4	2.4	2.4	2.4
87.5°	4.7	2.4	2.4	2.4	0.0	0.0	0.0	0.0	0.0
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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