

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: P580684

Luminaire Tested: **HCC4S40D010SL-HM43040940-41WWBB**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P580684  
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: HCC4S40D010SL-HM43040940-41WWBB  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE BAFFLE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT CYLINDER  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

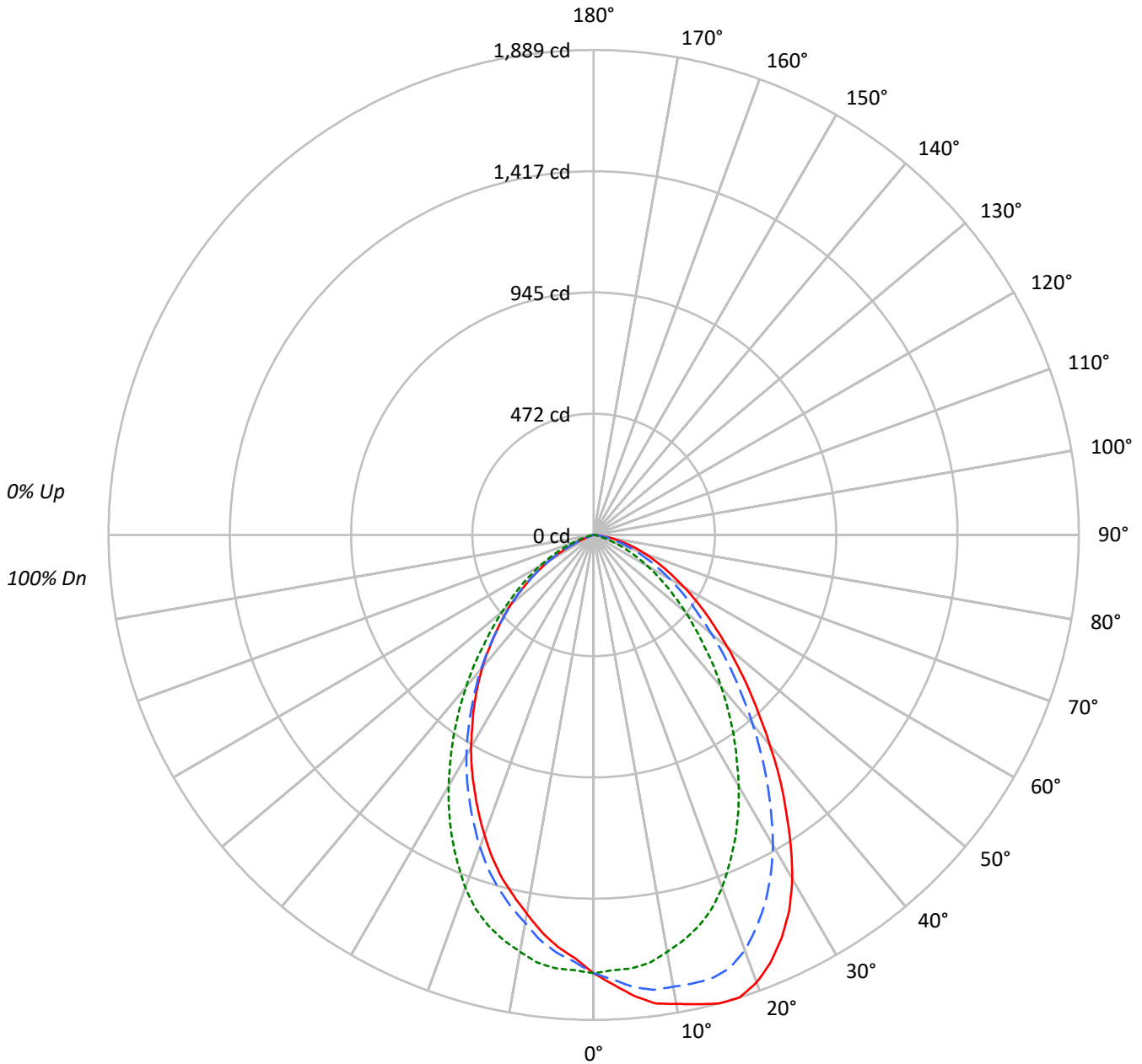
Lumens per Lamp: N/A  
Luminaire Lumens: 2948.5 lumens  
Efficiency: N/A  
Efficacy: 71.9 lumens/watt  
Spacing Criteria (0/90/45): 1.11 / 1.04 / 1.12  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

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					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	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°	210539	210539	210539
5°	223081	209845	199333
10°	232336	206497	187635
15°	241232	201544	176426
20°	243490	191865	163185
25°	235624	177443	149366
30°	220278	160815	135904
35°	196323	142958	122103
40°	171643	124321	108686
45°	149510	105465	94039
50°	130467	89460	80595
55°	114362	74148	65288
60°	100033	59897	47932
65°	87150	44655	26939
70°	76167	28923	8764
75°	62526	15060	2288
80°	46597	6961	1776
85°	27456	3538	3538

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	161.1	5.5
10°-20°	450.9	15.3
20°-30°	623.4	21.1
30°-40°	626.8	21.3
40°-50°	505.8	17.2
50°-60°	342.0	11.6
60°-70°	174.1	5.9
70°-80°	55.7	1.9
80°-90°	8.6	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°	1235.4	41.9
0°-40°	1862.2	63.2
0°-60°	2710.1	91.9
0°-90°	2948.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2948.5	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1707	1707	1707	1707	1707	
5°	1802	1768	1695	1634	1610	174
15°	1889	1787	1578	1428	1382	532
25°	1731	1581	1304	1144	1098	792
35°	1304	1178	949	830	811	815
45°	857	767	605	539	539	664
55°	532	459	345	301	304	478
65°	299	243	153	100	92	299
75°	131	92	32	7	5	141
85°	19	10	2	2	2	26
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°	1706.9	1706.9	1706.9	1706.9	1706.9	1706.9	1706.9	1706.9	1706.9
2.5°	1753.1	1743.4	1733.6	1716.7	1697.2	1677.8	1665.7	1655.9	1651.1
5°	1801.7	1789.5	1767.7	1731.3	1694.8	1660.8	1634.1	1617.2	1609.9
7.5°	1840.5	1823.5	1787.1	1736.1	1680.3	1626.8	1592.8	1568.5	1558.9
10°	1855.0	1835.6	1787.1	1719.1	1648.7	1583.1	1534.5	1510.3	1498.1
12.5°	1872.1	1850.2	1789.5	1704.5	1617.2	1539.4	1483.5	1452.0	1439.8
15°	1889.1	1860.0	1787.1	1682.6	1578.3	1488.5	1427.7	1396.2	1381.6
17.5°	1889.1	1855.0	1767.7	1646.3	1527.3	1432.5	1364.6	1328.2	1316.1
20°	1855.0	1816.2	1721.5	1588.0	1461.7	1359.8	1294.2	1257.8	1243.2
22.5°	1801.7	1758.0	1655.9	1517.6	1384.0	1284.4	1218.9	1184.9	1170.3
25°	1731.3	1687.6	1580.7	1437.5	1303.8	1204.3	1143.6	1112.0	1097.5
27.5°	1648.7	1600.1	1493.3	1350.0	1218.9	1124.3	1068.3	1039.3	1027.1
30°	1546.6	1500.6	1396.2	1255.3	1129.1	1041.6	990.6	963.9	954.2
32.5°	1427.7	1388.9	1286.9	1155.8	1036.8	956.7	910.6	888.7	879.0
35°	1303.8	1267.5	1177.6	1056.2	949.4	874.2	830.4	815.9	810.9
37.5°	1187.4	1155.8	1068.3	956.7	859.6	794.0	755.1	745.5	740.5
40°	1066.0	1044.1	963.9	861.9	772.1	713.9	682.2	675.0	675.0
42.5°	956.7	932.3	861.9	769.7	689.5	631.3	609.5	602.2	604.6
45°	857.1	832.8	767.3	682.2	604.6	556.0	539.1	539.1	539.1
47.5°	764.9	743.0	682.2	594.9	531.8	492.9	475.9	475.9	478.3
50°	679.9	665.3	597.3	522.0	466.2	429.8	417.7	415.2	420.0
52.5°	599.7	582.7	522.0	454.0	400.6	371.5	359.4	356.9	359.4
55°	531.8	512.3	458.9	393.4	344.8	315.7	301.1	298.6	303.6
57.5°	466.2	451.7	395.8	337.5	291.3	262.2	250.1	245.3	247.6
60°	405.5	390.9	339.9	284.1	242.8	213.7	196.6	191.8	194.3
62.5°	349.6	337.5	289.0	235.5	194.3	167.6	150.6	138.4	143.3
65°	298.6	286.5	242.8	189.3	153.0	123.9	99.5	89.8	92.3
67.5°	254.9	240.3	199.1	150.6	114.1	82.5	55.8	51.0	51.0
70°	211.2	196.6	160.3	116.6	80.2	43.7	24.3	24.3	24.3
72.5°	169.9	157.8	123.9	87.4	51.0	19.4	9.8	9.8	9.8
75°	131.2	121.4	92.3	60.8	31.6	9.8	7.3	4.8	4.8
77.5°	97.1	87.4	65.6	41.3	19.4	4.8	4.8	4.8	4.8
80°	65.6	58.3	43.7	24.3	9.8	2.5	2.5	2.5	2.5
82.5°	38.9	34.0	24.3	12.1	4.8	2.5	2.5	2.5	2.5
85°	19.4	14.6	9.8	4.8	2.5	2.5	2.5	2.5	2.5
87.5°	4.8	2.5	2.5	2.5	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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— 0°-180°    - - 45°-225°    - - - - 90°-270°

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