

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: P580470

Luminaire Tested: **HCC4S35D010BZ-HM43040840-41WWWB**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P580470  
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: HCC4S35D010BZ-HM43040840-41WWWB  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, BLACK BAFFLE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT  
CYLINDER  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

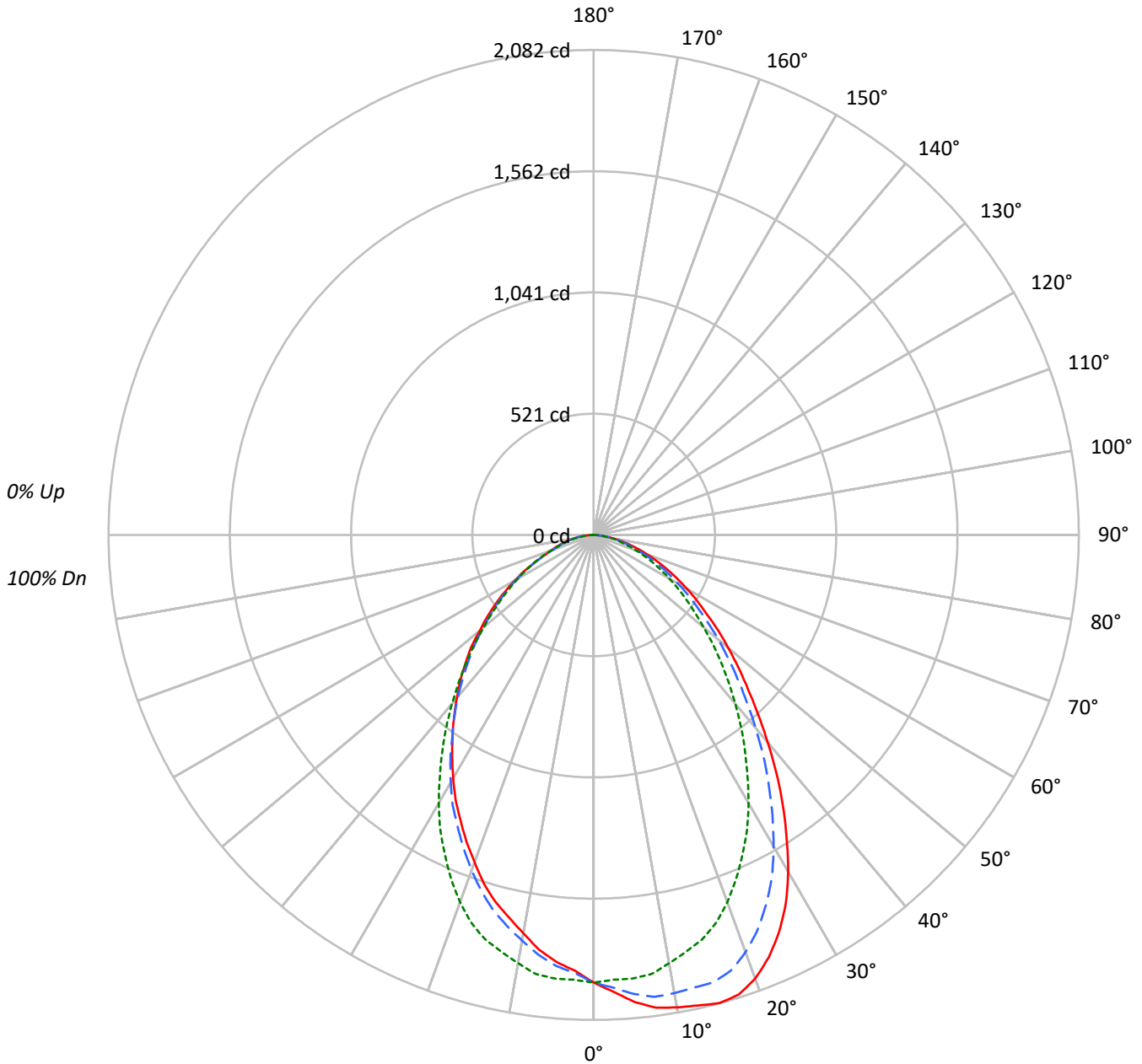
Lumens per Lamp: N/A  
Luminaire Lumens: 3726.0 lumens  
Efficiency: N/A  
Efficacy: 110.6 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.07 / 1.15  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

Input Watts (W): 33.7  
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	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			
1	110	106	103	99	108	104	101	98	100	97	95	96	94	92	92	91	89	87					87			
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	75					75			
3	94	85	77	72	92	83	76	71	80	75	70	78	73	69	75	71	68	66					66			
4	87	76	68	62	85	75	68	62	72	66	61	70	65	60	68	63	60	58					58			
5	81	69	61	55	79	68	60	55	66	59	54	64	58	53	62	57	53	51					51			
6	75	63	55	49	73	62	54	49	60	53	48	59	53	48	57	52	47	46					46			
7	70	58	50	44	68	57	49	44	55	48	43	54	48	43	53	47	43	41					41			
8	65	53	45	40	64	52	45	40	51	44	39	50	44	39	49	43	39	37					37			
9	61	49	41	36	60	48	41	36	47	41	36	46	40	36	45	40	36	34					34			
10	58	45	38	33	57	45	38	33	44	38	33	43	37	33	42	37	33	31					31			

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

	0°	90°	180°
0°	236984	236984	236984
5°	249181	236663	227811
10°	257937	233839	217481
15°	265801	229599	208171
20°	266120	220139	196184
25°	256107	205765	183935
30°	237811	189343	171782
35°	213172	170468	158934
40°	187053	152096	146943
45°	163482	134665	135520
50°	144341	117860	122101
55°	127286	104491	109781
60°	113774	92485	96136
65°	100779	81312	81312
70°	88032	69387	69387
75°	75203	58761	65814
80°	59596	52564	59596
85°	38353	45287	55902



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	182.0	4.9
10°-20°	512.6	13.8
20°-30°	718.2	19.3
30°-40°	739.9	19.9
40°-50°	629.9	16.9
50°-60°	466.7	12.5
60°-70°	292.9	7.9
70°-80°	145.5	3.9
80°-90°	38.2	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°	1412.8	37.9
0°-40°	2152.7	57.8
0°-60°	3249.4	87.2
0°-90°	3726.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3726.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1921	1921	1921	1921	1921	
5°	2012	1978	1911	1857	1840	193
15°	2082	1988	1798	1667	1630	585
25°	1882	1751	1512	1381	1352	861
35°	1416	1310	1132	1058	1056	883
45°	937	873	772	757	777	727
55°	592	545	486	496	510	535
65°	345	311	279	274	279	344
75°	158	141	123	133	138	169
85°	27	27	32	37	40	35
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°	1921.3	1921.3	1921.3	1921.3	1921.3	1921.3	1921.3	1921.3	1921.3
2.5°	1963.2	1955.8	1946.0	1928.7	1911.4	1896.6	1881.8	1874.4	1871.9
5°	2012.5	1997.7	1978.0	1946.0	1911.4	1881.8	1857.2	1844.8	1839.9
7.5°	2047.0	2032.3	2000.2	1950.8	1901.6	1857.2	1817.7	1800.4	1795.5
10°	2059.4	2042.1	1997.7	1931.1	1867.0	1812.8	1768.4	1746.1	1736.4
12.5°	2069.3	2047.0	1990.4	1911.4	1832.5	1765.9	1719.0	1689.5	1682.1
15°	2081.5	2056.9	1987.9	1891.7	1798.0	1719.0	1667.2	1640.1	1630.2
17.5°	2069.3	2042.1	1960.7	1852.2	1746.1	1659.8	1603.2	1578.4	1568.5
20°	2027.4	1997.7	1906.5	1790.5	1677.1	1588.3	1531.6	1506.9	1494.6
22.5°	1963.2	1931.1	1837.4	1714.1	1598.2	1511.9	1457.6	1433.0	1425.6
25°	1881.8	1849.8	1751.1	1625.3	1511.9	1428.0	1381.2	1358.9	1351.5
27.5°	1785.6	1753.6	1657.3	1534.0	1425.6	1346.7	1309.6	1287.4	1282.5
30°	1669.7	1637.7	1543.9	1430.5	1329.4	1255.4	1225.7	1208.5	1206.1
32.5°	1541.5	1514.4	1428.0	1324.4	1228.2	1166.6	1144.3	1132.1	1129.6
35°	1415.7	1386.1	1309.6	1215.9	1132.1	1077.8	1058.0	1055.5	1055.5
37.5°	1287.4	1257.9	1196.2	1109.8	1038.4	989.0	981.6	984.1	984.1
40°	1161.7	1134.6	1080.3	1008.7	944.6	907.6	905.2	910.1	912.6
42.5°	1043.3	1021.0	971.7	910.1	855.8	826.3	828.7	838.5	845.9
45°	937.2	917.5	873.1	818.8	772.0	749.8	757.1	769.5	776.9
47.5°	841.0	823.8	781.9	732.5	693.1	678.2	688.1	702.9	712.7
50°	752.2	737.5	698.0	646.2	614.2	604.3	616.6	631.4	636.3
52.5°	673.3	658.6	616.6	572.2	547.5	542.6	554.9	567.3	574.7
55°	591.9	579.5	545.0	505.6	485.9	483.4	495.7	505.6	510.5
57.5°	525.4	513.0	481.0	446.5	429.1	426.7	439.0	446.5	448.9
60°	461.2	448.9	419.3	387.2	374.9	374.9	382.3	387.2	389.7
62.5°	402.1	389.7	362.6	335.4	325.5	325.5	325.5	328.0	335.4
65°	345.3	335.4	310.8	286.1	278.6	273.8	273.8	273.8	278.6
67.5°	293.5	283.6	263.9	241.7	234.4	226.9	224.5	229.4	229.4
70°	244.1	236.7	217.0	199.7	192.4	185.0	182.5	192.4	192.4
72.5°	199.7	192.4	180.1	162.8	155.3	152.9	157.8	162.8	165.2
75°	157.8	150.4	140.6	130.7	123.3	125.8	133.2	135.7	138.1
77.5°	118.4	115.9	106.1	98.7	98.7	101.2	106.1	110.9	113.4
80°	83.9	81.4	76.4	71.5	74.0	78.9	81.4	86.3	83.9
82.5°	51.8	51.8	49.3	49.3	51.8	56.8	59.2	61.7	64.2
85°	27.1	27.1	27.1	29.6	32.0	34.5	37.0	39.5	39.5
87.5°	7.4	9.9	9.9	12.4	14.8	14.8	17.3	17.3	17.3
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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