

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: P580663

Luminaire Tested: **HCC4S40D010BZ-HM43040935-41WDW**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P580663  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-9)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/9/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HCC4S40D010BZ-HM43040935-41WDW  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WIDE DISTRIBUTION, WHITE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT  
CYLINDER  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

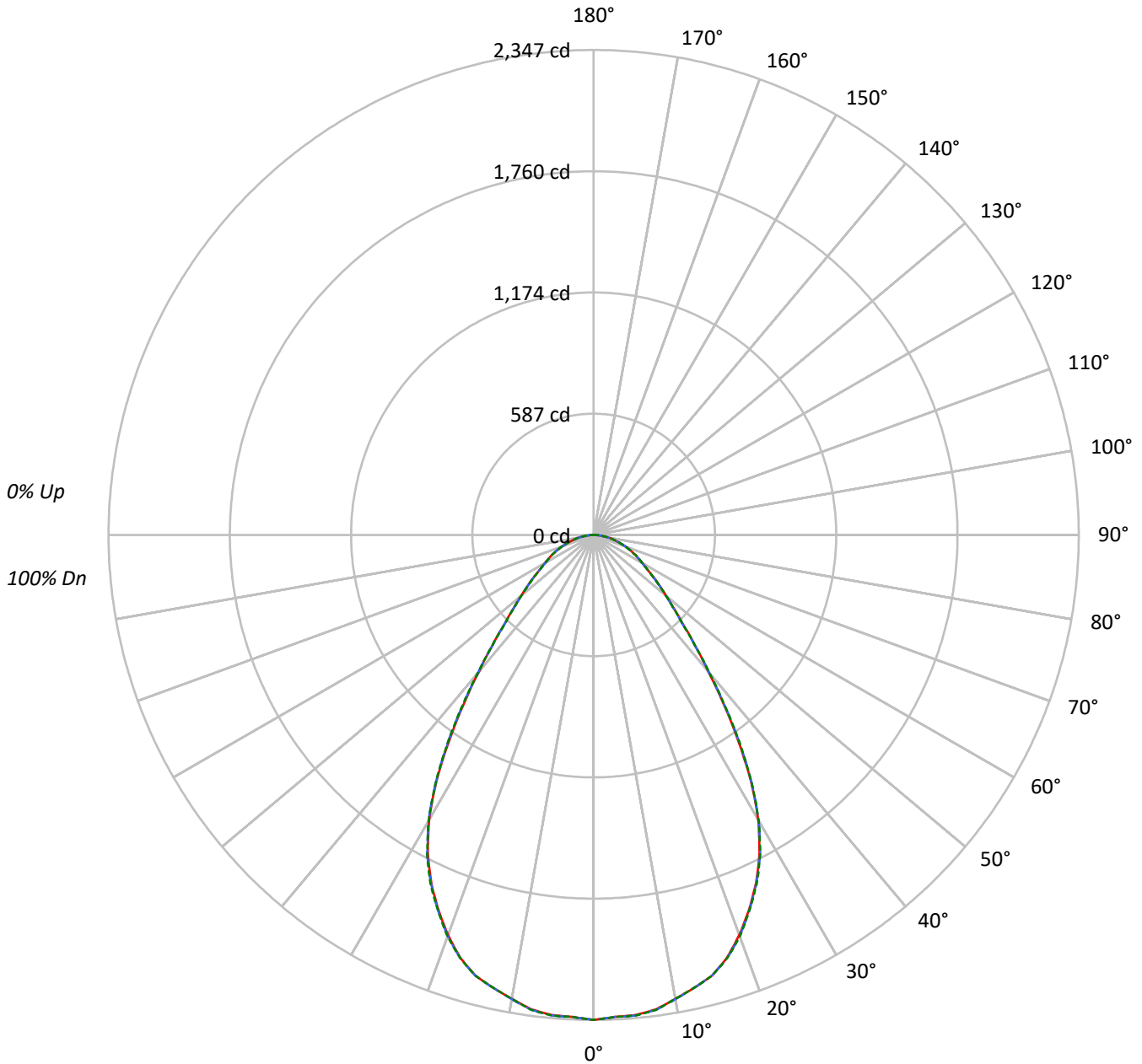
Lumens per Lamp: N/A  
Luminaire Lumens: 3621.2 lumens  
Efficiency: N/A  
Efficacy: 88.3 lumens/watt  
Spacing Criteria (0/90/45): 1.06 / 1.07 / 1.04  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

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
1	111	107	104	101	108	105	102	99	101	98	96	97	95	93	94	92	90	89				89
2	103	97	91	87	101	95	90	86	91	87	84	88	85	82	85	83	80	78				78
3	96	87	81	76	94	86	80	75	83	78	74	81	76	72	78	74	71	69				69
4	90	80	72	67	87	78	72	66	76	70	66	74	69	65	72	68	64	62				62
5	84	73	65	60	82	72	65	59	70	64	59	68	63	58	66	62	58	56				56
6	78	67	59	54	77	66	59	54	64	58	53	63	57	53	61	56	53	51				51
7	73	62	54	49	72	61	54	49	60	53	49	58	53	48	57	52	48	46				46
8	69	57	50	45	68	57	50	45	55	49	45	54	49	44	53	48	44	42				42
9	65	53	46	41	64	53	46	41	52	45	41	51	45	41	50	45	41	39				39
10	61	50	43	38	60	49	43	38	48	42	38	48	42	38	47	42	38	36				36

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

	0°	45°	90°
0°	289505	289505	289505
5°	288815	289100	289100
10°	285454	285754	285454
15°	282031	282031	282031
20°	270452	271082	271410
25°	252963	253303	253957
30°	226673	227357	227357
35°	184020	185496	185857
40°	138877	139666	140052
45°	106372	105971	105971
50°	87656	87176	87176
55°	75245	74707	74707
60°	67149	66533	66533
65°	63100	63100	63100
70°	58712	58712	58712
75°	53281	54424	53281
80°	50078	48302	50078
85°	41183	41183	41183



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	221.1	6.1
10°-20°	618.8	17.1
20°-30°	850.4	23.5
30°-40°	764.6	21.1
40°-50°	483.1	13.3
50°-60°	315.4	8.7
60°-70°	213.7	5.9
70°-80°	120.3	3.3
80°-90°	33.7	0.9
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°	1690.4	46.7
0°-40°	2455.0	67.8
0°-60°	3253.5	89.8
0°-90°	3621.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3621.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2347	2347	2347	2347	2347	
5°	2333	2333	2335	2335	2335	221
15°	2209	2209	2209	2209	2209	618
25°	1859	1861	1861	1866	1866	848
35°	1222	1227	1232	1237	1234	761
45°	610	608	608	608	608	484
55°	350	350	347	350	347	317
65°	216	216	216	216	216	214
75°	112	114	114	114	112	120
85°	29	29	29	29	29	34
90°	0	0	0	0	0	

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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2347.1	2347.1	2347.1	2347.1	2347.1
2.5°	2334.9	2334.9	2334.9	2334.9	2334.9
5°	2332.6	2332.6	2334.9	2334.9	2334.9
7.5°	2315.5	2318.0	2318.0	2318.0	2318.0
10°	2279.1	2279.1	2281.5	2281.5	2279.1
12.5°	2245.0	2245.0	2245.0	2247.5	2245.0
15°	2208.6	2208.6	2208.6	2208.6	2208.6
17.5°	2145.5	2147.8	2147.8	2147.8	2147.8
20°	2060.4	2065.2	2065.2	2067.7	2067.7
22.5°	1963.2	1965.7	1968.0	1970.5	1968.0
25°	1858.7	1861.2	1861.2	1866.0	1866.0
27.5°	1737.2	1739.7	1744.5	1744.5	1744.5
30°	1591.5	1593.9	1596.3	1596.3	1596.3
32.5°	1419.0	1419.0	1423.8	1426.2	1423.8
35°	1222.1	1227.0	1231.9	1236.7	1234.3
37.5°	1035.0	1040.0	1042.3	1042.3	1044.8
40°	862.5	867.4	867.4	872.3	869.8
42.5°	726.5	724.1	724.1	728.9	726.5
45°	609.8	607.5	607.5	607.5	607.5
47.5°	524.9	522.4	522.4	522.4	522.4
50°	456.8	454.3	454.3	454.3	454.3
52.5°	400.9	398.5	398.5	398.5	396.0
55°	349.9	349.9	347.4	349.9	347.4
57.5°	303.7	303.7	303.7	303.7	303.7
60°	272.2	269.7	269.7	269.7	269.7
62.5°	242.9	242.9	242.9	242.9	242.9
65°	216.2	216.2	216.2	216.2	216.2
67.5°	189.6	187.1	189.6	189.6	187.1
70°	162.8	160.4	162.8	162.8	162.8
72.5°	136.1	136.1	136.1	138.4	136.1
75°	111.8	114.2	114.2	114.2	111.8
77.5°	89.9	92.4	89.9	89.9	89.9
80°	70.5	68.0	68.0	68.0	70.5
82.5°	48.5	48.5	48.5	48.5	48.5
85°	29.1	29.1	29.1	29.1	29.1
87.5°	12.1	12.1	12.1	12.1	12.1
90°	0.0	0.0	0.0	0.0	0.0

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— 0°-180°    - - 45°-225°    - - - - 90°-270°

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