

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: P580591

Luminaire Tested: **HCC4S40D010BZ-HM43040835-41WDW**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P580591  
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-HM43040835-41WDW  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WIDE DISTRIBUTION, WHITE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT  
CYLINDER  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

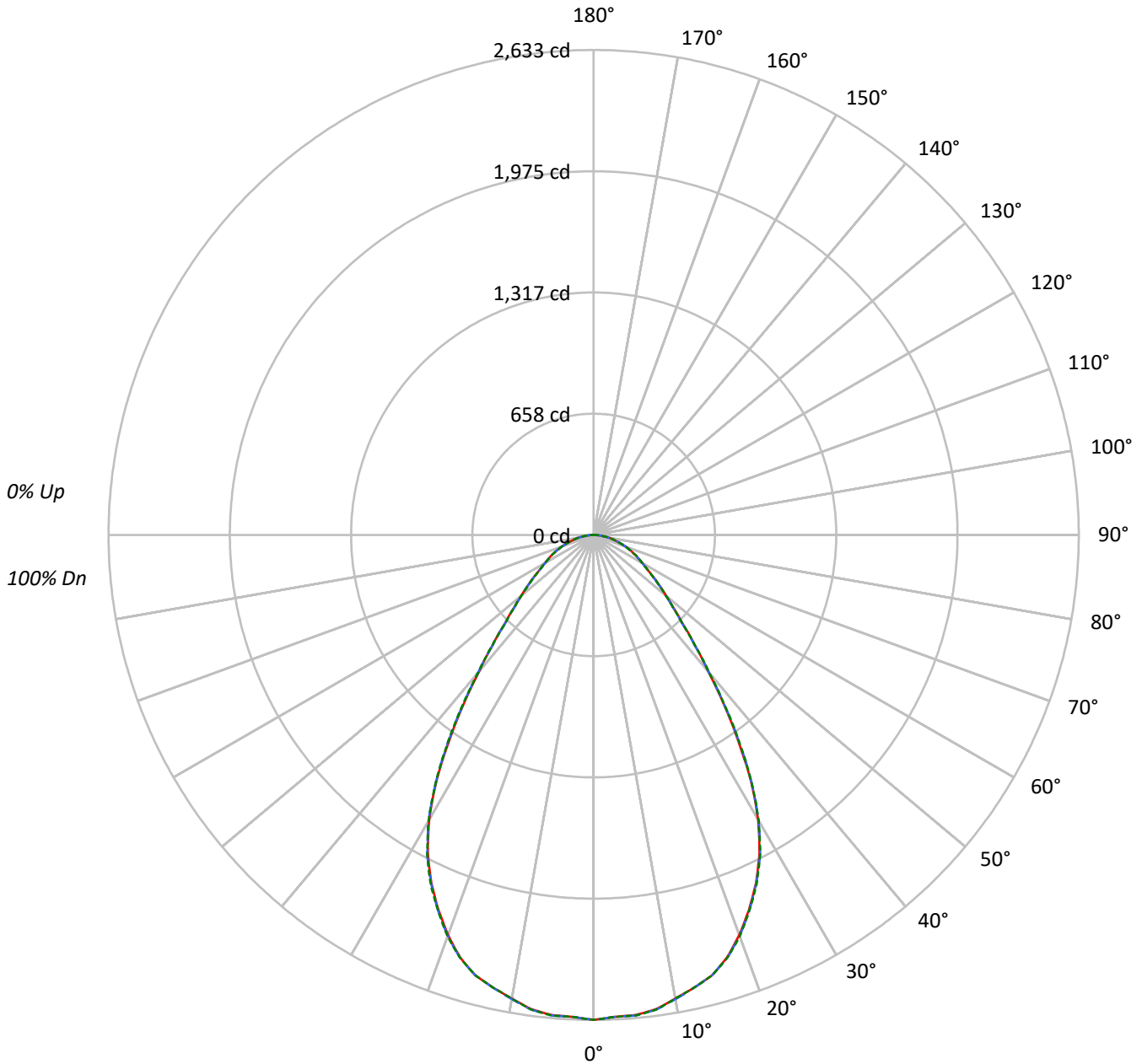
Lumens per Lamp: N/A  
Luminaire Lumens: 4061.8 lumens  
Efficiency: N/A  
Efficacy: 99.1 lumens/watt  
Spacing Criteria (0/90/45): 1.06 / 1.07 / 1.04  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

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

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

	0°	45°	90°
0°	324720	324720	324720
5°	323929	324276	324276
10°	320160	320511	320160
15°	316330	316330	316330
20°	303333	304055	304409
25°	283735	284102	284851
30°	254233	255016	255016
35°	206411	208053	208459
40°	155767	156653	157087
45°	119315	118844	118844
50°	98306	97788	97788
55°	84406	83804	83804
60°	75290	74599	74599
65°	70805	70805	70805
70°	65853	65853	65853
75°	59714	61049	59714
80°	56115	54197	56115
85°	46278	46278	46278



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	248.0	6.1
10°-20°	694.1	17.1
20°-30°	953.8	23.5
30°-40°	857.6	21.1
40°-50°	541.9	13.3
50°-60°	353.8	8.7
60°-70°	239.7	5.9
70°-80°	134.9	3.3
80°-90°	37.9	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°	1895.9	46.7
0°-40°	2753.6	67.8
0°-60°	3649.2	89.8
0°-90°	4061.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4061.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2633	2633	2633	2633	2633	
5°	2616	2616	2619	2619	2619	248
15°	2477	2477	2477	2477	2477	694
25°	2085	2088	2088	2093	2093	951
35°	1371	1376	1382	1387	1384	853
45°	684	681	681	681	681	543
55°	392	392	390	392	390	355
65°	243	243	243	243	243	240
75°	125	128	128	128	125	134
85°	33	33	33	33	33	38
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2632.6	2632.6	2632.6	2632.6	2632.6
2.5°	2619.0	2619.0	2619.0	2619.0	2619.0
5°	2616.2	2616.2	2619.0	2619.0	2619.0
7.5°	2597.1	2599.8	2599.8	2599.8	2599.8
10°	2556.2	2556.2	2559.0	2559.0	2556.2
12.5°	2518.1	2518.1	2518.1	2520.8	2518.1
15°	2477.2	2477.2	2477.2	2477.2	2477.2
17.5°	2406.3	2409.1	2409.1	2409.1	2409.1
20°	2310.9	2316.4	2316.4	2319.1	2319.1
22.5°	2202.0	2204.7	2207.5	2210.2	2207.5
25°	2084.8	2087.5	2087.5	2093.0	2093.0
27.5°	1948.5	1951.2	1956.7	1956.7	1956.7
30°	1785.0	1787.8	1790.5	1790.5	1790.5
32.5°	1591.5	1591.5	1597.0	1599.7	1597.0
35°	1370.8	1376.3	1381.7	1387.1	1384.4
37.5°	1160.9	1166.4	1169.1	1169.1	1171.9
40°	967.4	972.9	972.9	978.4	975.6
42.5°	814.9	812.2	812.2	817.5	814.9
45°	684.0	681.3	681.3	681.3	681.3
47.5°	588.6	585.9	585.9	585.9	585.9
50°	512.3	509.6	509.6	509.6	509.6
52.5°	449.6	446.9	446.9	446.9	444.3
55°	392.5	392.5	389.7	392.5	389.7
57.5°	340.7	340.7	340.7	340.7	340.7
60°	305.2	302.4	302.4	302.4	302.4
62.5°	272.5	272.5	272.5	272.5	272.5
65°	242.6	242.6	242.6	242.6	242.6
67.5°	212.5	209.9	212.5	212.5	209.9
70°	182.6	179.9	182.6	182.6	182.6
72.5°	152.6	152.6	152.6	155.4	152.6
75°	125.3	128.1	128.1	128.1	125.3
77.5°	100.8	103.6	100.8	100.8	100.8
80°	79.0	76.3	76.3	76.3	79.0
82.5°	54.5	54.5	54.5	54.5	54.5
85°	32.7	32.7	32.7	32.7	32.7
87.5°	13.7	13.7	13.7	13.7	13.7
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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