

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: P580054

Luminaire Tested: **HCC4S20D010BZ-HM40525927-41WWBB**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P580054  
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: HCC4S20D010BZ-HM40525927-41WWBB  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE BAFFLE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT CYLINDER  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

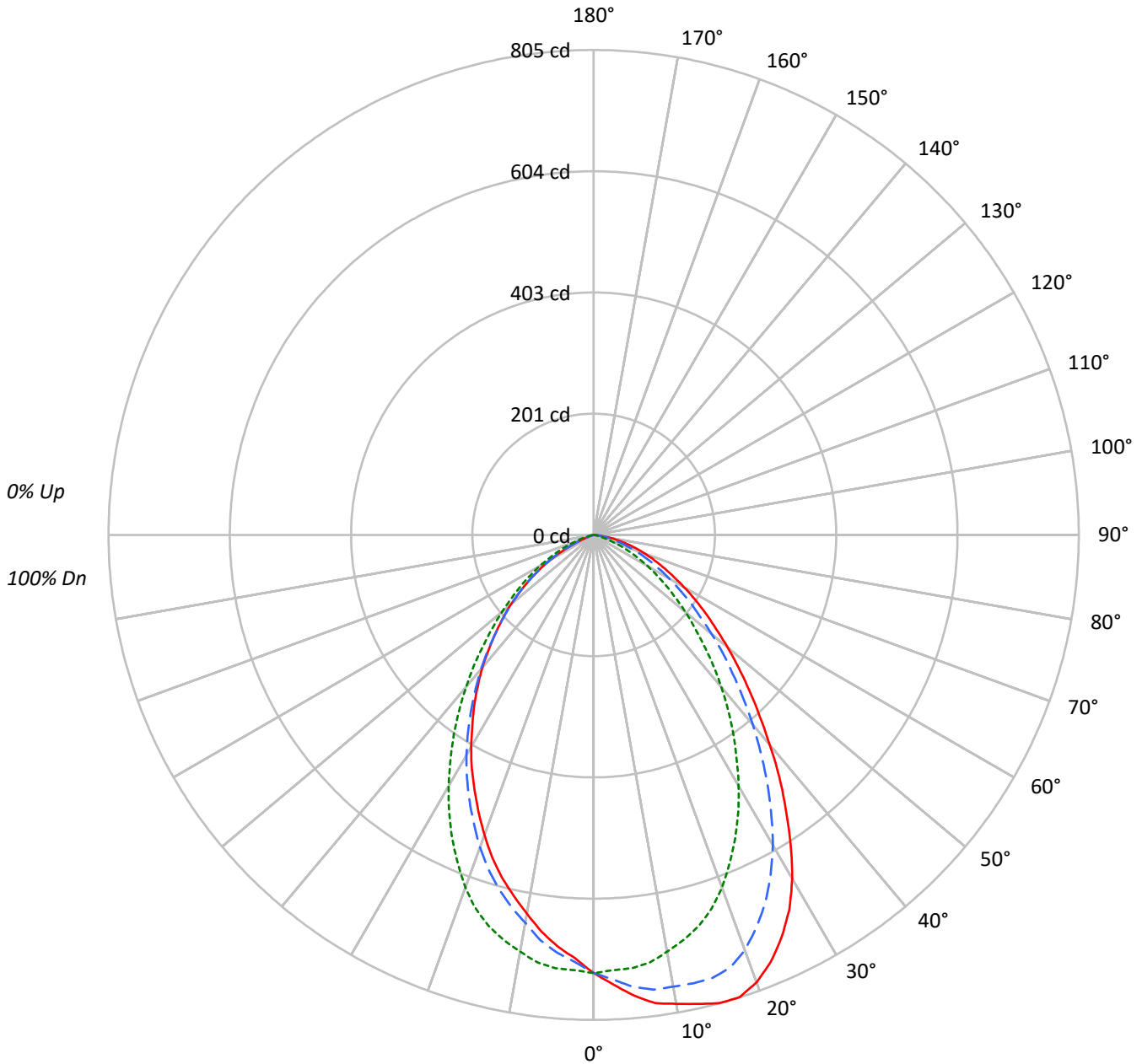
Lumens per Lamp: N/A  
Luminaire Lumens: 1256.1 lumens  
Efficiency: N/A  
Efficacy: 62.8 lumens/watt  
Spacing Criteria (0/90/45): 1.11 / 1.04 / 1.12  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

Input Watts (W): 20  
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					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°	89697	89697	89697
5°	95042	89396	84914
10°	98984	87974	79934
15°	102758	85863	75162
20°	103736	81737	69529
25°	100371	75602	63625
30°	93860	68522	57897
35°	83646	60893	52024
40°	73117	52974	46308
45°	63704	44935	40051
50°	55572	38129	34329
55°	48708	31590	27806
60°	42604	25533	20401
65°	37125	19000	11470
70°	32457	12334	3715
75°	26640	6386	1001
80°	19889	2912	710
85°	11746	1415	1415



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	68.6	5.5
10°-20°	192.1	15.3
20°-30°	265.6	21.1
30°-40°	267.0	21.3
40°-50°	215.5	17.2
50°-60°	145.7	11.6
60°-70°	74.2	5.9
70°-80°	23.7	1.9
80°-90°	3.6	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°	526.3	41.9
0°-40°	793.4	63.2
0°-60°	1154.6	91.9
0°-90°	1256.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1256.1	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	727	727	727	727	727	
5°	768	753	722	696	686	74
15°	805	761	672	608	589	227
25°	738	673	556	487	468	338
35°	556	502	404	354	346	347
45°	365	327	258	230	230	283
55°	226	196	147	128	129	204
65°	127	104	65	42	39	128
75°	56	39	13	3	2	60
85°	8	4	1	1	1	11
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°	727.2	727.2	727.2	727.2	727.2	727.2	727.2	727.2	727.2
2.5°	746.8	742.7	738.6	731.3	723.1	714.8	709.6	705.5	703.5
5°	767.6	762.4	753.1	737.5	722.0	707.6	696.2	688.9	685.8
7.5°	784.1	776.9	761.4	739.6	715.8	693.0	678.6	668.2	664.1
10°	790.3	782.0	761.4	732.4	702.4	674.4	653.8	643.5	638.2
12.5°	797.5	788.2	762.4	726.2	688.9	655.9	632.0	618.6	613.4
15°	804.7	792.3	761.4	716.9	672.4	634.1	608.3	594.8	588.6
17.5°	804.7	790.3	753.1	701.4	650.7	610.3	581.3	565.8	560.7
20°	790.3	773.8	733.4	676.5	622.7	579.2	551.4	535.9	529.7
22.5°	767.6	748.9	705.5	646.6	589.7	547.2	519.2	504.8	498.6
25°	737.5	718.9	673.4	612.4	555.5	513.1	487.2	473.8	467.5
27.5°	702.4	681.7	636.1	575.1	519.2	479.0	455.1	442.7	437.6
30°	659.0	639.2	594.8	534.8	481.1	443.8	422.1	410.6	406.5
32.5°	608.3	591.7	548.3	492.4	441.7	407.5	387.9	378.6	374.5
35°	555.5	540.0	501.7	450.0	404.4	372.4	353.7	347.5	345.5
37.5°	505.8	492.4	455.1	407.5	366.2	338.3	321.7	317.6	315.5
40°	454.1	444.8	410.6	367.3	329.0	304.1	290.6	287.6	287.6
42.5°	407.5	397.2	367.3	327.9	293.7	269.0	259.7	256.6	257.6
45°	365.2	354.8	326.9	290.6	257.6	236.9	229.6	229.6	229.6
47.5°	325.9	316.6	290.6	253.5	226.5	210.0	202.8	202.8	203.8
50°	289.6	283.4	254.5	222.4	198.7	183.1	177.9	176.9	178.9
52.5°	255.6	248.2	222.4	193.4	170.7	158.3	153.1	152.1	153.1
55°	226.5	218.3	195.6	167.6	146.9	134.4	128.2	127.2	129.3
57.5°	198.7	192.4	168.6	143.8	124.1	111.7	106.6	104.5	105.5
60°	172.7	166.5	144.9	121.0	103.5	91.1	83.8	81.7	82.7
62.5°	149.0	143.8	123.1	100.4	82.7	71.3	64.1	59.0	61.0
65°	127.2	122.0	103.5	80.6	65.1	52.8	42.4	38.3	39.3
67.5°	108.6	102.4	84.9	64.1	48.6	35.2	23.7	21.7	21.7
70°	90.0	83.8	68.2	49.7	34.2	18.6	10.3	10.3	10.3
72.5°	72.4	67.2	52.8	37.3	21.7	8.3	4.1	4.1	4.1
75°	55.9	51.7	39.3	25.8	13.4	4.1	3.1	2.1	2.1
77.5°	41.4	37.3	28.0	17.5	8.3	2.1	2.1	2.1	2.1
80°	28.0	24.8	18.6	10.3	4.1	1.0	1.0	1.0	1.0
82.5°	16.5	14.5	10.3	5.2	2.1	1.0	1.0	1.0	1.0
85°	8.3	6.2	4.1	2.1	1.0	1.0	1.0	1.0	1.0
87.5°	2.1	1.0	1.0	1.0	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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