

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: P580072

Luminaire Tested: **HCC4S20D010SL-HM40525930-41WWBB**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P580072  
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: HCC4S20D010SL-HM40525930-41WWBB  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE BAFFLE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT  
CYLINDER  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

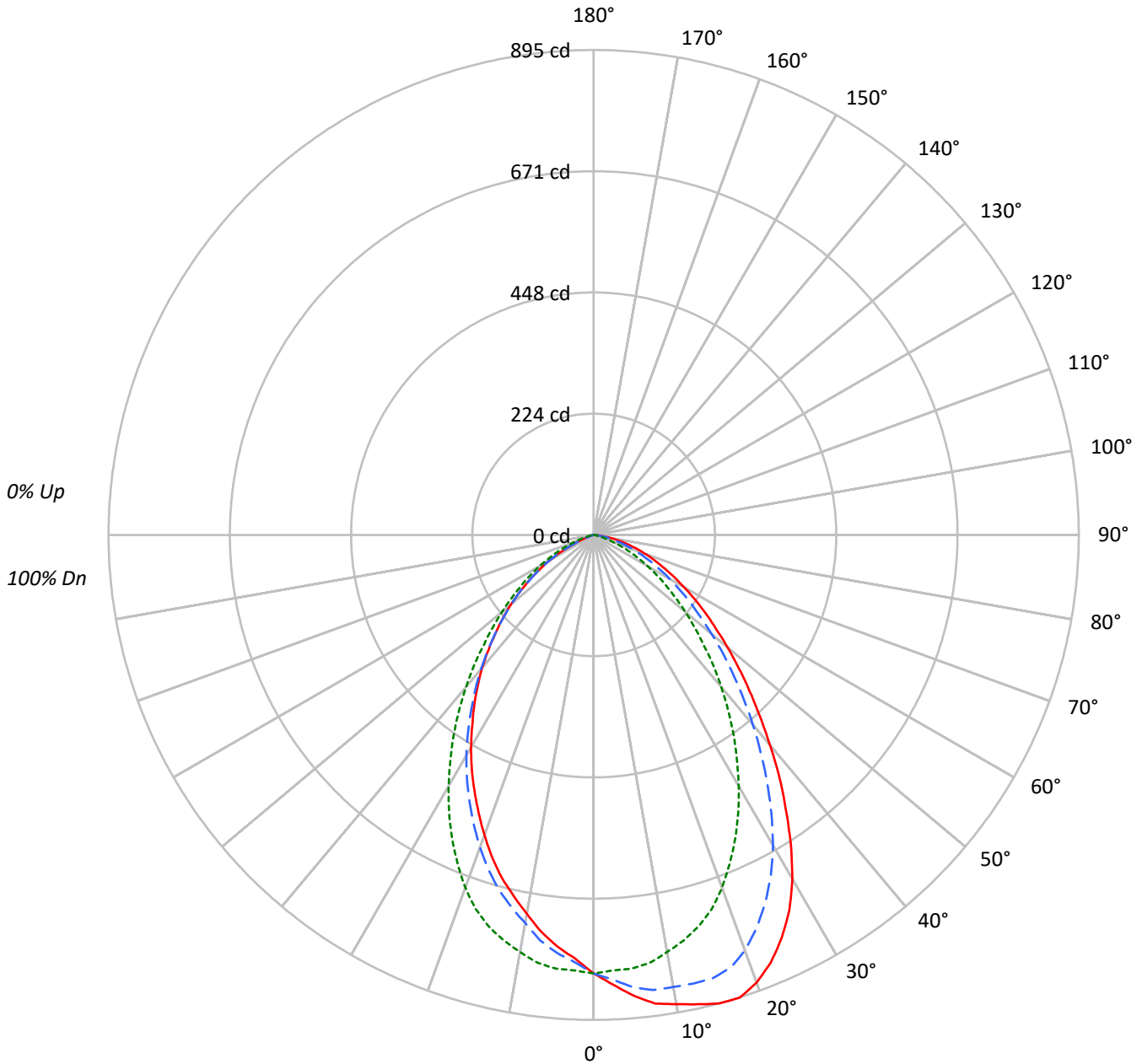
Lumens per Lamp: N/A  
Luminaire Lumens: 1397.5 lumens  
Efficiency: N/A  
Efficacy: 69.9 lumens/watt  
Spacing Criteria (0/90/45): 1.11 / 1.04 / 1.12  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

Input Watts (W): 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	43	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°	99799	99799	99799
5°	105727	99474	94472
10°	110131	97882	88939
15°	114327	95530	83616
20°	115418	90938	77339
25°	111681	84108	70798
30°	104428	76227	64420
35°	93057	67760	57882
40°	81362	58932	51509
45°	70874	49976	44586
50°	61828	42389	38206
55°	54192	35139	30924
60°	47414	28369	22720
65°	41298	21160	12754
70°	36100	13704	4147
75°	29643	7101	1096
80°	22091	3267	781
85°	13020	1557	1557



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	76.4	5.5
10°-20°	213.7	15.3
20°-30°	295.5	21.1
30°-40°	297.1	21.3
40°-50°	239.8	17.2
50°-60°	162.1	11.6
60°-70°	82.5	5.9
70°-80°	26.4	1.9
80°-90°	4.0	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°	585.6	41.9
0°-40°	882.7	63.2
0°-60°	1284.5	91.9
0°-90°	1397.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1397.5	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	809	809	809	809	809	
5°	854	838	803	775	763	82
15°	895	847	748	677	655	252
25°	821	749	618	542	520	376
35°	618	558	450	394	384	386
45°	406	364	286	256	256	315
55°	252	218	163	143	144	226
65°	142	115	72	47	44	142
75°	62	44	15	3	2	67
85°	9	5	1	1	1	12
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°	809.1	809.1	809.1	809.1	809.1	809.1	809.1	809.1	809.1
2.5°	830.9	826.3	821.7	813.7	804.5	795.2	789.5	784.9	782.6
5°	853.9	848.2	837.9	820.6	803.4	787.2	774.6	766.5	763.0
7.5°	872.4	864.3	847.1	822.9	796.4	771.1	755.0	743.5	738.9
10°	879.3	870.1	847.1	814.8	781.5	750.4	727.3	715.8	710.1
12.5°	887.3	877.0	848.2	807.9	766.5	729.6	703.2	688.2	682.5
15°	895.3	881.6	847.1	797.5	748.1	705.5	676.7	661.7	654.8
17.5°	895.3	879.3	837.9	780.3	723.9	679.0	646.8	629.5	623.7
20°	879.3	860.8	816.0	752.7	692.8	644.5	613.4	596.2	589.2
22.5°	853.9	833.2	784.9	719.3	656.0	608.8	577.7	561.6	554.7
25°	820.6	799.8	749.2	681.3	618.0	570.9	542.1	527.0	520.2
27.5°	781.5	758.4	707.8	639.9	577.7	532.9	506.4	492.5	486.8
30°	733.2	711.3	661.7	594.9	535.2	493.7	469.6	456.9	452.3
32.5°	676.7	658.3	610.0	547.8	491.4	453.4	431.6	421.2	416.6
35°	618.0	600.8	558.1	500.7	450.0	414.3	393.7	386.7	384.4
37.5°	562.8	547.8	506.4	453.4	407.4	376.3	358.0	353.3	351.0
40°	505.3	494.9	456.9	408.6	366.0	338.4	323.3	319.9	319.9
42.5°	453.4	441.9	408.6	364.9	326.9	299.3	288.8	285.4	286.5
45°	406.3	394.8	363.7	323.3	286.5	263.6	255.6	255.6	255.6
47.5°	362.6	352.1	323.3	281.9	252.0	233.6	225.6	225.6	226.8
50°	322.2	315.3	283.1	247.4	220.9	203.7	198.0	196.8	199.1
52.5°	284.2	276.2	247.4	215.2	189.9	176.1	170.3	169.2	170.3
55°	252.0	242.8	217.5	186.4	163.4	149.6	142.7	141.5	143.8
57.5°	220.9	214.0	187.6	160.0	138.1	124.3	118.5	116.2	117.3
60°	192.2	185.2	161.2	134.7	115.0	101.3	93.3	91.0	92.1
62.5°	165.7	160.0	137.0	111.6	92.1	79.4	71.3	65.6	67.9
65°	141.5	135.8	115.0	89.8	72.5	58.7	47.1	42.6	43.7
67.5°	120.9	113.9	94.4	71.3	54.1	39.1	26.5	24.2	24.2
70°	100.1	93.3	75.9	55.3	38.0	20.8	11.5	11.5	11.5
72.5°	80.5	74.8	58.7	41.4	24.2	9.2	4.6	4.6	4.6
75°	62.2	57.6	43.7	28.8	14.9	4.6	3.4	2.3	2.3
77.5°	46.0	41.4	31.1	19.6	9.2	2.3	2.3	2.3	2.3
80°	31.1	27.6	20.8	11.5	4.6	1.1	1.1	1.1	1.1
82.5°	18.5	16.1	11.5	5.7	2.3	1.1	1.1	1.1	1.1
85°	9.2	6.9	4.6	2.3	1.1	1.1	1.1	1.1	1.1
87.5°	2.3	1.1	1.1	1.1	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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