

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: **HCC4S20D010MW-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: HCC4S20D010MW-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**

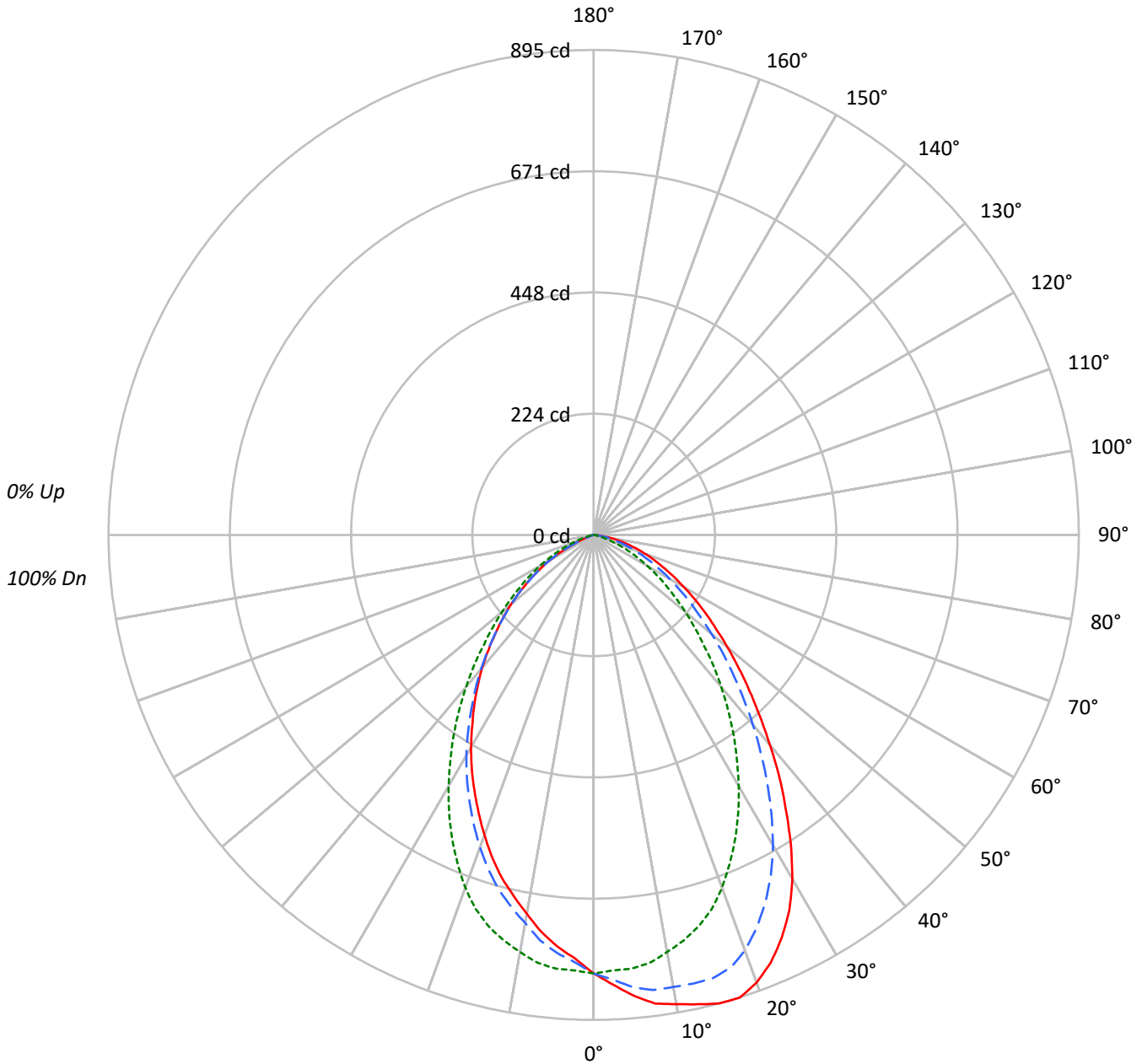
Lumens per Lamp: N/A  
Luminaire Lumens: 1397.5 lumens  
Efficiency: N/A  
Efficacy: 69.9 lumens/watt  
Spacing Criteria (0/90/45): 1.11 / 1.04 / 1.12  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

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



TEST NUMBER: P580072  
CATALOG NUMBER: HCC4S20D010MW-HM40525930-41WWBB

### Luminous Intensity Polar Plot





TEST NUMBER: P580072

CATALOG NUMBER: HCC4S20D010MW-HM40525930-41WWBB

**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	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



TEST NUMBER: P580072  
 CATALOG NUMBER: HCC4S20D010MW-HM40525930-41WWBB

**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	



TEST NUMBER: P580072

CATALOG NUMBER: HCC4S20D010MW-HM40525930-41WWBB

**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

Classified  
Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269

Scaled Data Report



Report Generated By 670245859 / DESKTOP-T8S5UU9

Classified  
Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269

Scaled Data Report





Classified  
Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269

Scaled Data Report



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

Classified  
Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269

Scaled Data Report



Classified  
Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269

Scaled Data Report



Classified  
Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269

Scaled Data Report



(END OF REPORT)