

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: P580005

Luminaire Tested: **HCC4S20D010BZ-HM40525830-41WWBB**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P580005  
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-HM40525830-41WWBB  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE BAFFLE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT  
CYLINDER  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

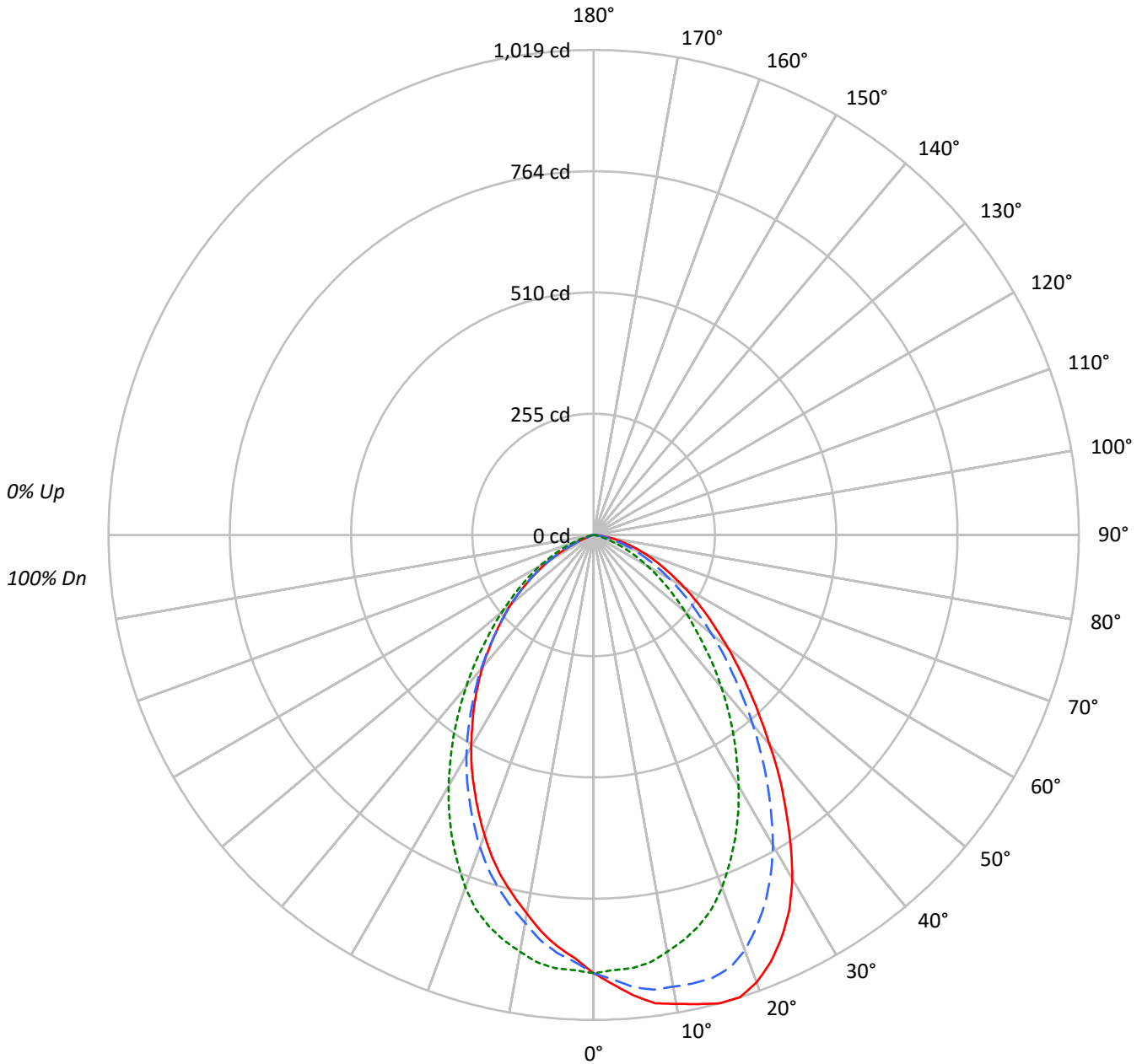
Lumens per Lamp: N/A  
Luminaire Lumens: 1590.2 lumens  
Efficiency: N/A  
Efficacy: 79.5 lumens/watt  
Spacing Criteria (0/90/45): 1.11 / 1.04 / 1.12  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

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: P580005  
CATALOG NUMBER: HCC4S20D010BZ-HM40525830-41WWBB

### Luminous Intensity Polar Plot





TEST NUMBER: P580005

CATALOG NUMBER: HCC4S20D010BZ-HM40525830-41WWBB

**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	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°	113564	113564	113564
5°	120313	113169	107510
10°	125311	111383	101213
15°	130110	108696	95160
20°	131327	103474	88011
25°	127087	95703	80569
30°	118813	86724	73307
35°	105886	77096	65862
40°	92568	67063	58626
45°	80625	56884	50726
50°	70367	48242	43463
55°	61675	39977	35203
60°	53951	32317	25829
65°	46990	24079	14535
70°	41077	15580	4724
75°	33741	8102	1239
80°	25074	3765	923
85°	14718	1840	1840



TEST NUMBER: P580005  
 CATALOG NUMBER: HCC4S20D010BZ-HM40525830-41WWBB

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	86.9	5.5
10°-20°	243.2	15.3
20°-30°	336.2	21.1
30°-40°	338.1	21.3
40°-50°	272.8	17.2
50°-60°	184.5	11.6
60°-70°	93.9	5.9
70°-80°	30.1	1.9
80°-90°	4.6	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°	666.3	41.9
0°-40°	1004.4	63.2
0°-60°	1461.7	91.9
0°-90°	1590.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1590.2	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	921	921	921	921	921	
5°	972	953	914	881	868	94
15°	1019	964	851	770	745	287
25°	934	853	703	617	592	427
35°	703	635	512	448	437	439
45°	462	414	326	291	291	358
55°	287	248	186	162	164	258
65°	161	131	82	54	50	161
75°	71	50	17	4	3	76
85°	10	5	1	1	1	14
90°	0	0	0	0	0	

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



TEST NUMBER: P580005

CATALOG NUMBER: HCC4S20D010BZ-HM40525830-41WWBB

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	920.7	920.7	920.7	920.7	920.7	920.7	920.7	920.7	920.7
2.5°	945.5	940.3	935.0	925.9	915.4	905.0	898.3	893.2	890.5
5°	971.7	965.2	953.4	933.8	914.0	895.8	881.4	872.2	868.3
7.5°	992.6	983.6	963.8	936.4	906.2	877.5	859.1	846.0	840.8
10°	1000.5	990.1	963.8	927.2	889.3	853.8	827.7	814.6	808.1
12.5°	1009.7	997.9	965.2	919.3	872.2	830.3	800.1	783.2	776.6
15°	1018.9	1003.2	963.8	907.5	851.2	802.8	770.1	753.0	745.2
17.5°	1018.9	1000.5	953.4	887.9	823.8	772.6	736.0	716.3	709.8
20°	1000.5	979.5	928.5	856.5	788.3	733.4	698.1	678.3	670.5
22.5°	971.7	948.1	893.2	818.5	746.5	692.8	657.5	639.1	631.2
25°	933.8	910.1	852.6	775.3	703.2	649.5	616.9	599.8	592.0
27.5°	889.3	863.0	805.4	728.1	657.5	606.3	576.3	560.5	554.0
30°	834.2	809.3	753.0	677.1	608.9	561.8	534.3	519.9	514.7
32.5°	770.1	749.1	694.0	623.4	559.2	516.0	491.1	479.3	474.1
35°	703.2	683.6	635.2	569.7	512.0	471.4	447.9	440.0	437.4
37.5°	640.4	623.4	576.3	516.0	463.6	428.3	407.3	402.0	399.4
40°	574.9	563.2	519.9	464.9	416.5	385.0	368.0	364.1	364.1
42.5°	516.0	502.8	464.9	415.1	372.0	340.5	328.7	324.8	326.1
45°	462.2	449.2	413.8	368.0	326.1	299.9	290.8	290.8	290.8
47.5°	412.6	400.8	368.0	320.8	286.8	265.9	256.7	256.7	258.0
50°	366.7	358.8	322.2	281.6	251.4	231.8	225.3	223.9	226.5
52.5°	323.5	314.3	281.6	244.9	216.1	200.4	193.8	192.5	193.8
55°	286.8	276.3	247.5	212.2	185.9	170.2	162.4	161.0	163.7
57.5°	251.4	243.6	213.5	182.0	157.1	141.4	134.9	132.2	133.6
60°	218.7	210.8	183.3	153.2	131.0	115.3	106.1	103.5	104.7
62.5°	188.6	182.0	155.9	127.1	104.7	90.4	81.2	74.7	77.3
65°	161.0	154.5	131.0	102.2	82.5	66.8	53.7	48.4	49.8
67.5°	137.5	129.6	107.4	81.2	61.6	44.5	30.2	27.5	27.5
70°	113.9	106.1	86.5	62.9	43.2	23.6	13.1	13.1	13.1
72.5°	91.6	85.1	66.8	47.1	27.5	10.4	5.3	5.3	5.3
75°	70.8	65.5	49.8	32.7	17.0	5.3	3.9	2.6	2.6
77.5°	52.4	47.1	35.3	22.3	10.4	2.6	2.6	2.6	2.6
80°	35.3	31.4	23.6	13.1	5.3	1.3	1.3	1.3	1.3
82.5°	21.0	18.4	13.1	6.5	2.6	1.3	1.3	1.3	1.3
85°	10.4	7.9	5.3	2.6	1.3	1.3	1.3	1.3	1.3
87.5°	2.6	1.3	1.3	1.3	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)