

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: P592690

Luminaire Tested: **HCC4S20D010MB-HM40525950-41WWW**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P592690  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-16)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/9/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HCC4S20D010MB-HM40525950-41WWW  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 5000K CCT  
CYLINDER  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

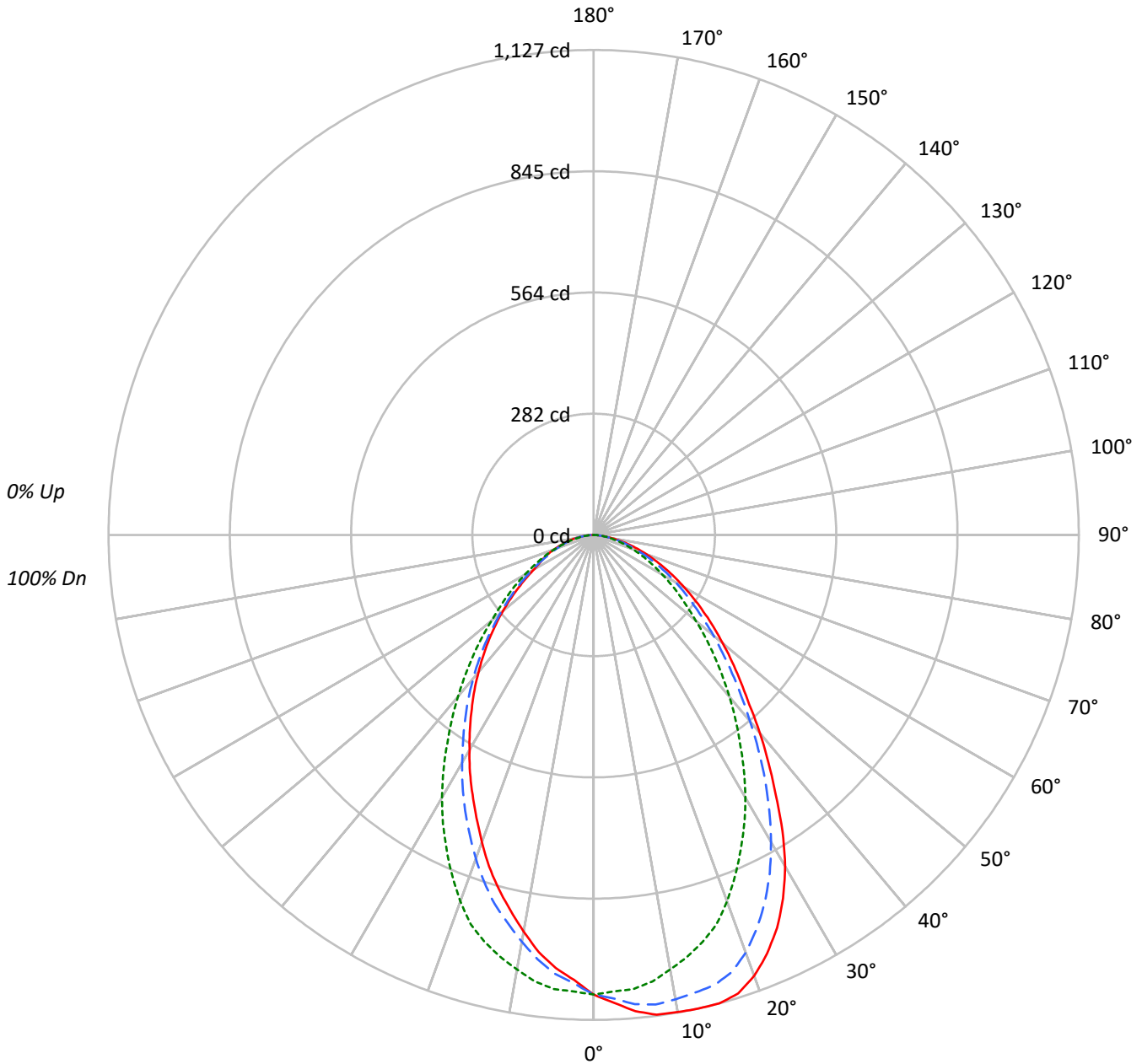
Lumens per Lamp: N/A  
Luminaire Lumens: 1907.3 lumens  
Efficiency: N/A  
Efficacy: 95.4 lumens/watt  
Spacing Criteria (0/90/45): 1.06 / 1.03 / 1.1  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

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: P592690  
CATALOG NUMBER: HCC4S20D010MB-HM40525950-41WWW

### Luminous Intensity Polar Plot



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



TEST NUMBER: P592690

CATALOG NUMBER: HCC4S20D010MB-HM40525950-41WWW

**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20									20									20									20									
RC	80									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	106	103	100	108	104	101	98	100	97	95	96	94	92	93	91	89	87																			
2	102	95	89	84	100	93	88	83	90	85	81	87	83	80	84	81	78	76																			
3	94	85	78	72	92	84	77	72	81	75	71	78	73	69	76	72	68	66																			
4	87	77	69	63	85	76	68	63	73	67	62	71	66	61	69	64	60	58																			
5	81	70	62	56	79	69	61	56	67	60	55	65	59	54	63	58	54	52																			
6	76	64	56	50	74	63	55	50	61	54	49	59	53	49	58	53	48	47																			
7	71	58	50	45	69	58	50	45	56	49	44	55	49	44	53	48	44	42																			
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38																			
9	62	50	42	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35																			
10	59	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32																			

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

	0°	90°	180°
0°	131745	131745	131745
5°	137536	131159	125092
10°	141017	128417	117245
15°	143940	124990	108785
20°	143167	118910	99628
25°	137158	109953	90627
30°	126703	100397	82138
35°	111066	89307	74355
40°	96706	78898	66967
45°	84166	68833	59849
50°	74991	59314	52809
55°	67009	52149	45654
60°	59823	45564	39347
65°	53148	39985	37387
70°	46667	34441	34910
75°	39508	29357	32359
80°	30331	25003	29478
85°	17832	19672	24767



TEST NUMBER: P592690  
 CATALOG NUMBER: HCC4S20D010MB-HM40525950-41WWW

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	100.1	5.2
10°-20°	276.2	14.5
20°-30°	377.3	19.8
30°-40°	378.9	19.9
40°-50°	313.4	16.4
50°-60°	227.1	11.9
60°-70°	143.9	7.5
70°-80°	72.7	3.8
80°-90°	17.8	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°	753.5	39.5
0°-40°	1132.4	59.4
0°-60°	1672.9	87.7
0°-90°	1907.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1907.3	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1068	1068	1068	1068	1068	
5°	1111	1094	1059	1024	1010	106
15°	1127	1083	979	888	852	317
25°	1008	941	808	706	666	461
35°	738	694	593	520	494	462
45°	482	455	395	356	343	375
55°	312	284	242	221	212	280
65°	182	162	137	123	128	181
75°	83	72	62	64	68	89
85°	13	13	14	16	18	17
90°	0	0	0	0	0	



TEST NUMBER: P592690

CATALOG NUMBER: HCC4S20D010MB-HM40525950-41WWW

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	1068.1	1068.1	1068.1	1068.1	1068.1	1068.1	1068.1	1068.1	1068.1
2.5°	1088.2	1084.4	1078.1	1070.6	1061.8	1051.7	1043.0	1037.9	1035.4
5°	1110.8	1105.7	1094.5	1078.1	1059.3	1040.4	1024.0	1014.1	1010.3
7.5°	1124.6	1117.1	1100.7	1075.5	1046.6	1019.0	995.1	981.4	977.6
10°	1125.9	1117.1	1095.7	1061.8	1025.3	988.8	960.0	939.9	936.1
12.5°	1127.2	1115.8	1089.4	1049.2	1004.0	958.8	923.6	899.7	893.4
15°	1127.2	1115.8	1083.1	1035.4	978.8	927.3	888.4	860.7	851.9
17.5°	1117.1	1104.4	1065.6	1010.3	948.7	890.9	845.7	816.8	807.9
20°	1090.7	1076.8	1032.9	972.5	905.9	845.7	800.4	770.2	759.0
22.5°	1052.9	1036.7	990.1	924.8	858.2	796.6	752.7	721.2	711.1
25°	1007.8	991.4	941.1	877.1	807.9	750.1	706.2	677.3	665.9
27.5°	952.5	934.8	885.8	821.7	757.7	699.9	659.6	633.3	622.0
30°	889.6	870.8	824.2	762.8	704.9	649.7	610.7	589.3	576.7
32.5°	816.8	800.4	759.0	703.7	649.7	596.9	564.2	545.3	535.3
35°	737.6	728.8	693.6	645.9	593.1	549.1	520.2	502.6	493.8
37.5°	667.2	658.4	628.2	588.1	541.6	501.4	477.5	462.4	454.9
40°	600.6	593.1	564.2	530.3	490.0	454.9	434.7	423.5	415.9
42.5°	535.3	531.5	507.7	476.2	441.0	410.9	394.6	385.7	379.4
45°	482.5	477.5	454.9	424.7	394.6	369.4	355.6	349.3	343.1
47.5°	436.0	429.8	405.8	379.4	351.8	329.2	316.7	310.4	307.9
50°	390.8	384.5	363.1	336.8	309.1	292.7	282.7	276.4	275.2
52.5°	350.5	344.3	320.4	295.2	273.9	260.1	251.3	245.0	242.5
55°	311.6	304.1	284.0	260.1	242.5	230.0	221.1	214.8	212.3
57.5°	276.4	268.9	251.3	228.7	212.3	201.1	193.5	187.2	184.7
60°	242.5	236.3	219.9	198.5	184.7	174.7	167.1	162.1	159.5
62.5°	211.0	206.1	189.7	170.9	159.5	150.8	144.5	139.5	142.0
65°	182.1	177.2	162.1	145.8	137.0	128.1	123.2	123.2	128.1
67.5°	154.5	149.6	137.0	123.2	115.6	109.3	105.5	109.3	113.1
70°	129.4	124.4	113.1	101.7	95.5	90.5	90.5	94.3	96.8
72.5°	105.5	100.5	91.8	82.9	77.9	74.1	77.9	80.4	82.9
75°	82.9	79.1	71.6	65.4	61.6	60.3	64.1	66.6	67.9
77.5°	61.6	59.1	54.0	49.0	46.5	47.7	51.5	52.8	54.0
80°	42.7	41.5	37.7	35.2	35.2	36.5	39.0	40.3	41.5
82.5°	26.4	26.4	23.9	22.6	23.9	26.4	27.6	28.9	28.9
85°	12.6	13.9	12.6	12.6	13.9	16.3	16.3	17.5	17.5
87.5°	3.8	3.8	5.0	5.0	6.3	6.3	6.3	6.3	7.6
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)