

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: P579989

Luminaire Tested: **HCC4S20D010BZ-HM40525827-41WWWB**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P579989  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-18)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/9/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HCC4S20D010BZ-HM40525827-41WWWB  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, BLACK BAFFLE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT  
CYLINDER  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

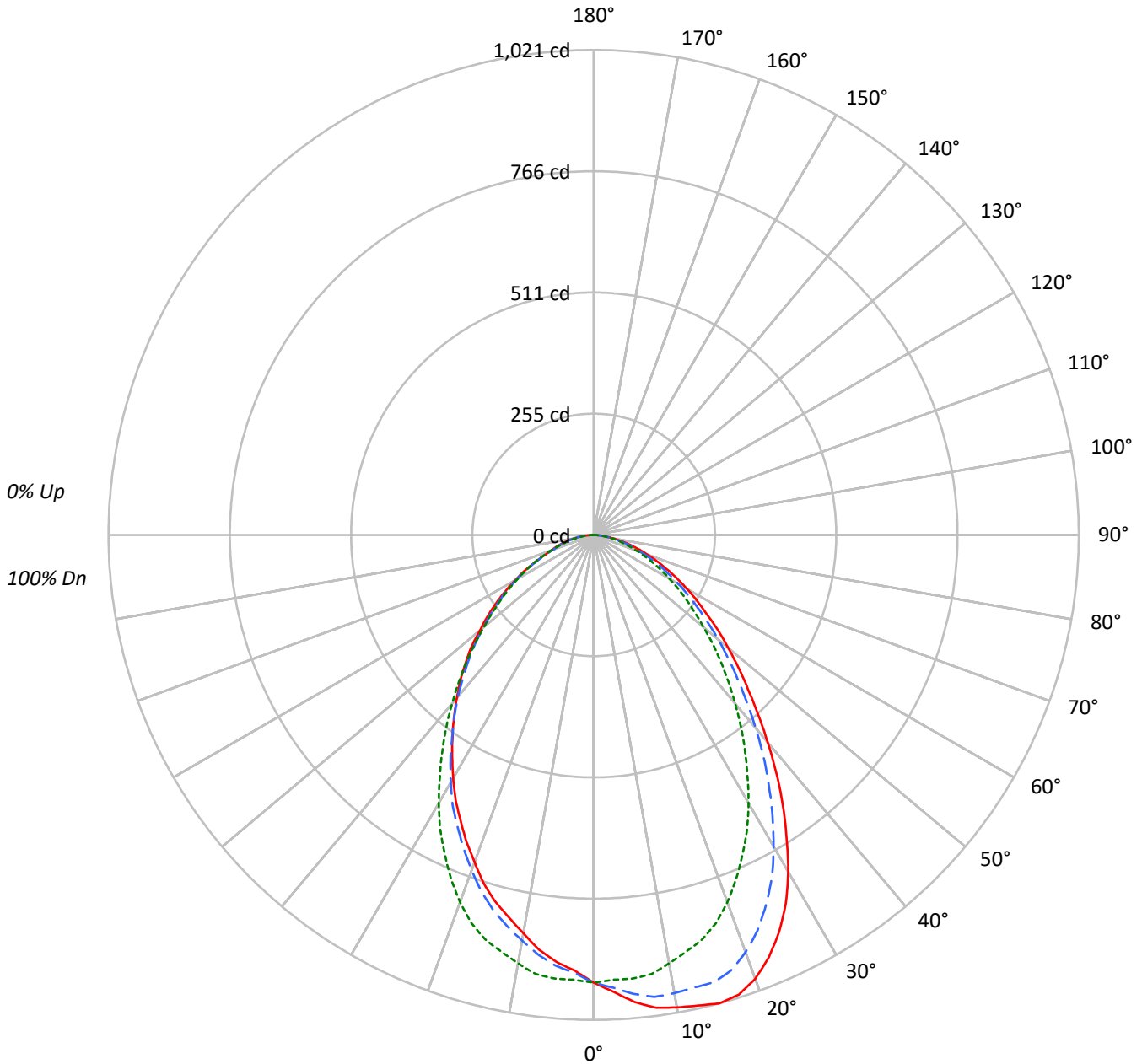
Lumens per Lamp: N/A  
Luminaire Lumens: 1827.4 lumens  
Efficiency: N/A  
Efficacy: 91.4 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.07 / 1.15  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

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: P579989  
CATALOG NUMBER: HCC4S20D010BZ-HM40525827-41WWWB

### Luminous Intensity Polar Plot





TEST NUMBER: P579989

CATALOG NUMBER: HCC4S20D010BZ-HM40525827-41WWWB

**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	110	106	103	99	108	104	101	98	100	97	95	96	94	92	92	91	89	87								
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	75								
3	94	85	77	72	92	83	76	71	80	75	70	78	73	69	75	71	68	66								
4	87	76	68	62	85	75	68	62	72	66	61	70	65	60	68	63	60	58								
5	81	69	61	55	79	68	60	55	66	59	54	64	58	53	62	57	53	51								
6	75	63	55	49	73	62	54	49	60	53	48	59	53	48	57	52	47	46								
7	70	58	50	44	68	57	49	44	55	48	43	54	48	43	53	47	43	41								
8	65	53	45	40	64	52	45	40	51	44	39	50	44	39	49	43	39	37								
9	61	49	41	36	60	48	41	36	47	41	36	46	40	36	45	40	36	34								
10	58	45	38	33	57	45	38	33	44	38	33	43	37	33	42	37	33	31								

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

	0°	90°	180°
0°	116229	116229	116229
5°	122207	116066	111720
10°	126501	114690	106649
15°	130366	112603	102106
20°	130513	107963	96215
25°	125604	100916	90219
30°	116619	92863	84246
35°	104546	83616	77969
40°	91731	74599	72071
45°	80171	66042	66461
50°	70789	57798	59889
55°	62428	51246	53848
60°	55802	45367	47143
65°	49412	39897	39897
70°	43168	34044	34044
75°	36887	28785	32312
80°	29265	25714	29265
85°	18823	22219	27456



TEST NUMBER: P579989  
 CATALOG NUMBER: HCC4S20D010BZ-HM40525827-41WWWB

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	89.3	4.9
10°-20°	251.4	13.8
20°-30°	352.2	19.3
30°-40°	362.9	19.9
40°-50°	308.9	16.9
50°-60°	228.9	12.5
60°-70°	143.7	7.9
70°-80°	71.4	3.9
80°-90°	18.7	1.0
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°	692.9	37.9
0°-40°	1055.8	57.8
0°-60°	1593.6	87.2
0°-90°	1827.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1827.4	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	942	942	942	942	942	
5°	987	970	937	911	902	95
15°	1021	975	882	818	800	287
25°	923	859	742	677	663	422
35°	694	642	555	519	518	433
45°	460	428	379	371	381	357
55°	290	267	238	243	250	262
65°	169	152	137	134	137	169
75°	77	69	60	65	68	83
85°	13	13	16	18	19	17
90°	0	0	0	0	0	

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



TEST NUMBER: P579989

CATALOG NUMBER: HCC4S20D010BZ-HM40525827-41WWWB

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	942.3	942.3	942.3	942.3	942.3	942.3	942.3	942.3	942.3
2.5°	962.8	959.2	954.4	945.9	937.4	930.2	922.9	919.3	918.1
5°	987.0	979.8	970.1	954.4	937.4	922.9	910.8	904.8	902.3
7.5°	1004.0	996.7	981.0	956.8	932.6	910.8	891.4	883.0	880.6
10°	1010.0	1001.6	979.8	947.1	915.7	889.0	867.2	856.4	851.5
12.5°	1014.9	1004.0	976.1	937.4	898.7	866.1	843.0	828.6	824.9
15°	1020.9	1008.8	975.0	927.8	881.8	843.0	817.7	804.4	799.6
17.5°	1014.9	1001.6	961.6	908.4	856.4	814.0	786.3	774.1	769.3
20°	994.3	979.8	935.0	878.1	822.5	778.9	751.2	739.0	733.0
22.5°	962.8	947.1	901.2	840.6	783.9	741.5	714.9	702.8	699.1
25°	922.9	907.2	858.8	797.2	741.5	700.4	677.4	666.5	662.9
27.5°	875.7	860.0	812.9	752.3	699.1	660.4	642.3	631.4	629.0
30°	818.8	803.1	757.2	701.6	652.0	615.7	601.1	592.7	591.5
32.5°	756.0	742.7	700.4	649.5	602.4	572.1	561.2	555.3	554.0
35°	694.3	679.8	642.3	596.3	555.3	528.5	518.9	517.8	517.8
37.5°	631.4	616.9	586.7	544.4	509.3	485.1	481.4	482.7	482.7
40°	569.7	556.4	529.8	494.7	463.3	445.2	443.9	446.3	447.6
42.5°	511.7	500.8	476.6	446.3	419.7	405.2	406.4	411.3	414.9
45°	459.6	450.0	428.2	401.6	378.6	367.7	371.4	377.4	381.0
47.5°	412.5	404.0	383.4	359.2	339.9	332.6	337.4	344.8	349.6
50°	368.9	361.6	342.3	316.9	301.2	296.4	302.3	309.7	312.1
52.5°	330.2	323.0	302.3	280.7	268.5	266.1	272.2	278.3	281.8
55°	290.3	284.2	267.4	248.0	238.3	237.1	243.2	248.0	250.4
57.5°	257.6	251.7	235.8	219.0	210.5	209.2	215.3	219.0	220.1
60°	226.2	220.1	205.7	189.9	183.9	183.9	187.5	189.9	191.1
62.5°	197.2	191.1	177.8	164.5	159.7	159.7	159.7	160.9	164.5
65°	169.3	164.5	152.4	140.3	136.7	134.3	134.3	134.3	136.7
67.5°	143.9	139.1	129.4	118.5	114.9	111.3	110.1	112.5	112.5
70°	119.7	116.1	106.4	98.0	94.4	90.7	89.5	94.4	94.4
72.5°	98.0	94.4	88.3	79.8	76.2	75.0	77.4	79.8	81.1
75°	77.4	73.8	68.9	64.1	60.4	61.7	65.3	66.5	67.8
77.5°	58.0	56.9	52.0	48.4	48.4	49.6	52.0	54.5	55.6
80°	41.2	39.9	37.5	35.1	36.2	38.7	39.9	42.3	41.2
82.5°	25.3	25.3	24.2	24.2	25.3	27.9	29.0	30.3	31.4
85°	13.3	13.3	13.3	14.6	15.7	17.0	18.1	19.4	19.4
87.5°	3.7	4.8	4.8	6.1	7.2	7.2	8.5	8.5	8.5
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)