

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: P580037

Luminaire Tested: **HCC4S20D010BZ-HM40525840-41WWW**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P580037  
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: HCC4S20D010BZ-HM40525840-41WWW  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT  
CYLINDER  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

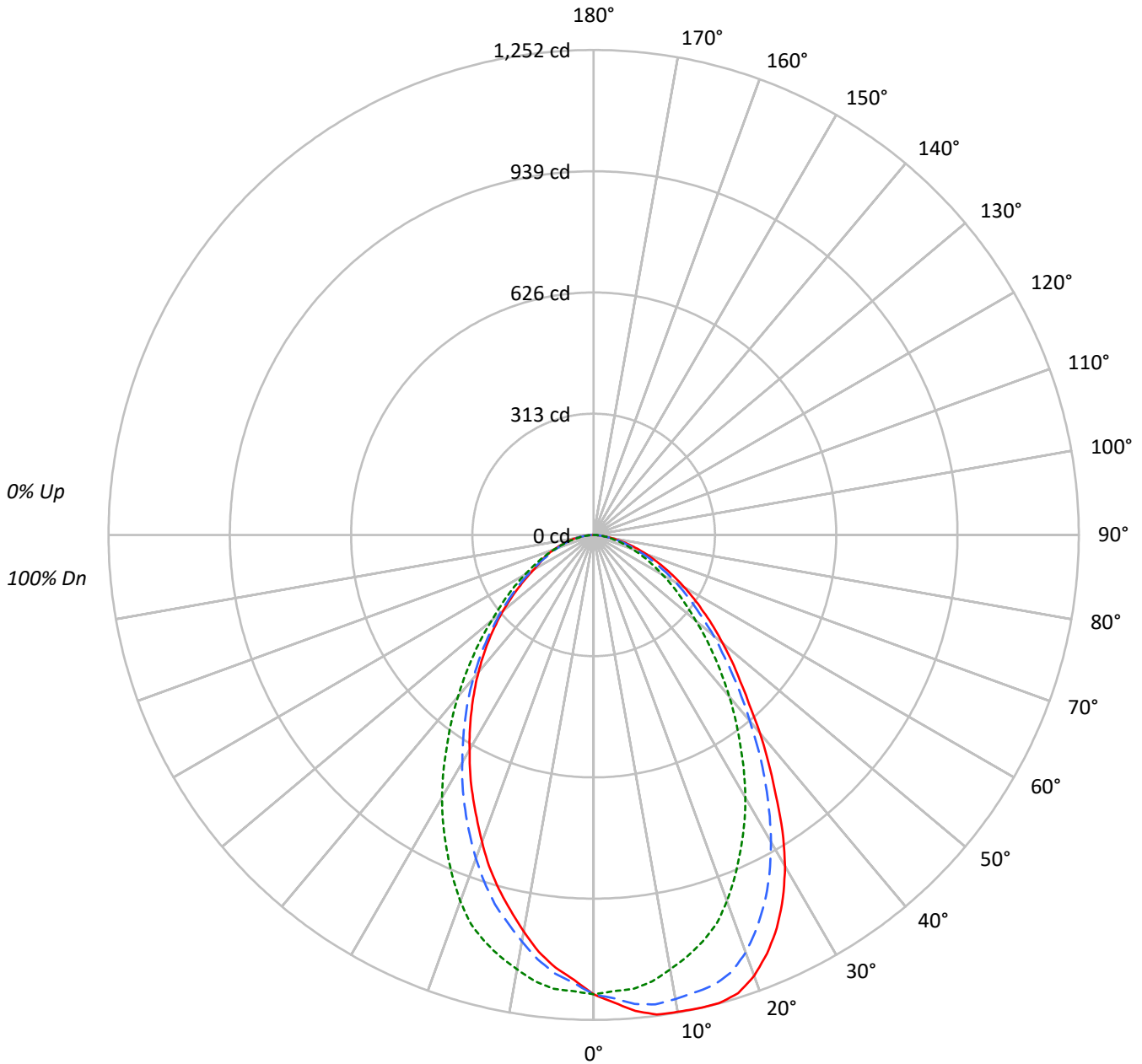
Lumens per Lamp: N/A  
Luminaire Lumens: 2118.0 lumens  
Efficiency: N/A  
Efficacy: 105.9 lumens/watt  
Spacing Criteria (0/90/45): 1.06 / 1.03 / 1.1  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

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: P580037  
CATALOG NUMBER: HCC4S20D010BZ-HM40525840-41WWW

### Luminous Intensity Polar Plot





TEST NUMBER: P580037

CATALOG NUMBER: HCC4S20D010BZ-HM40525840-41WWW

**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	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°	146288	146288	146288
5°	152728	145633	138910
10°	156586	142608	130196
15°	159825	138806	120801
20°	158971	132049	110627
25°	152292	122106	100657
30°	140704	111492	91225
35°	123338	99170	82577
40°	107398	87609	74373
45°	93463	76438	66443
50°	83262	65876	58642
55°	74406	57912	50708
60°	66434	50596	43714
65°	59043	44392	41532
70°	51824	38264	38769
75°	43892	32597	35933
80°	33740	27773	32675
85°	19813	21795	27597



TEST NUMBER: P580037  
 CATALOG NUMBER: HCC4S20D010BZ-HM40525840-41WWW

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	111.2	5.2
10°-20°	306.7	14.5
20°-30°	419.0	19.8
30°-40°	420.7	19.9
40°-50°	348.0	16.4
50°-60°	252.2	11.9
60°-70°	159.7	7.5
70°-80°	80.8	3.8
80°-90°	19.8	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°	836.8	39.5
0°-40°	1257.5	59.4
0°-60°	1857.7	87.7
0°-90°	2118.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2118.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1186	1186	1186	1186	1186	
5°	1234	1215	1176	1137	1122	118
15°	1252	1203	1087	986	946	352
25°	1119	1045	897	784	740	511
35°	819	770	659	578	548	513
45°	536	505	438	395	381	417
55°	346	315	269	246	236	311
65°	202	180	152	137	142	201
75°	92	80	68	71	75	98
85°	14	14	15	18	20	19
90°	0	0	0	0	0	



TEST NUMBER: P580037

CATALOG NUMBER: HCC4S20D010BZ-HM40525840-41WWW

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	1186.0	1186.0	1186.0	1186.0	1186.0	1186.0	1186.0	1186.0	1186.0
2.5°	1208.4	1204.2	1197.2	1188.9	1179.1	1167.9	1158.1	1152.5	1149.8
5°	1233.5	1227.9	1215.4	1197.2	1176.2	1155.4	1137.3	1126.0	1121.9
7.5°	1248.9	1240.5	1222.4	1194.4	1162.4	1131.6	1105.1	1089.8	1085.5
10°	1250.2	1240.5	1216.7	1179.1	1138.6	1098.1	1066.0	1043.8	1039.5
12.5°	1251.6	1239.1	1209.7	1165.1	1114.9	1064.6	1025.5	999.0	992.0
15°	1251.6	1239.1	1202.7	1149.8	1087.0	1029.8	986.5	955.8	946.0
17.5°	1240.5	1226.5	1183.2	1121.9	1053.5	989.3	939.0	906.9	897.2
20°	1211.1	1195.9	1147.0	1080.0	1006.0	939.0	888.8	855.3	842.8
22.5°	1169.3	1151.1	1099.5	1027.0	953.0	884.7	835.8	801.0	789.7
25°	1119.0	1100.9	1045.1	973.9	897.2	833.1	784.2	752.1	739.6
27.5°	1057.6	1038.1	983.7	912.6	841.4	777.2	732.6	703.2	690.7
30°	987.9	966.9	915.3	846.9	782.8	721.3	678.1	654.4	640.5
32.5°	906.9	888.8	842.8	781.3	721.3	662.7	626.5	605.6	594.4
35°	819.1	809.3	770.2	717.2	658.6	609.7	577.6	558.1	548.4
37.5°	741.0	731.2	697.7	653.0	601.4	556.8	530.3	513.5	505.1
40°	667.0	658.6	626.5	588.9	544.1	505.1	482.8	470.3	461.9
42.5°	594.4	590.2	563.8	528.9	489.8	456.3	438.2	428.4	421.4
45°	535.8	530.3	505.1	471.6	438.2	410.3	394.9	387.9	380.9
47.5°	484.1	477.2	450.7	421.4	390.7	365.5	351.7	344.7	341.8
50°	433.9	427.0	403.3	373.9	343.3	325.1	313.9	306.9	305.6
52.5°	389.3	382.3	355.8	327.9	304.2	288.8	279.1	272.1	269.3
55°	346.0	337.7	315.3	288.8	269.3	255.3	245.6	238.6	235.8
57.5°	306.9	298.6	279.1	253.9	235.8	223.2	214.8	208.0	205.1
60°	269.3	262.3	244.2	220.5	205.1	194.0	185.6	180.0	177.2
62.5°	234.4	228.8	210.7	189.7	177.2	167.5	160.5	154.8	157.7
65°	202.3	196.7	180.0	161.8	152.1	142.3	136.7	136.7	142.3
67.5°	171.6	166.1	152.1	136.7	128.3	121.4	117.2	121.4	125.6
70°	143.7	138.1	125.6	113.0	106.1	100.5	100.5	104.6	107.5
72.5°	117.2	111.6	101.9	92.1	86.5	82.4	86.5	89.4	92.1
75°	92.1	87.9	79.5	72.6	68.4	67.0	71.1	74.0	75.4
77.5°	68.4	65.6	60.0	54.4	51.6	53.0	57.2	58.6	60.0
80°	47.5	46.0	41.9	39.1	39.1	40.5	43.2	44.6	46.0
82.5°	29.2	29.2	26.5	25.1	26.5	29.2	30.7	32.1	32.1
85°	14.0	15.4	14.0	14.0	15.4	18.1	18.1	19.5	19.5
87.5°	4.1	4.1	5.6	5.6	7.0	7.0	7.0	7.0	8.4
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)