

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: P580004

Luminaire Tested: **HCC4W20D010SL-HM40525830-41RWWH**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P580004  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-15)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/9/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HCC4W20D010SL-HM40525830-41RWWH  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, HAZE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT  
CYLINDER  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

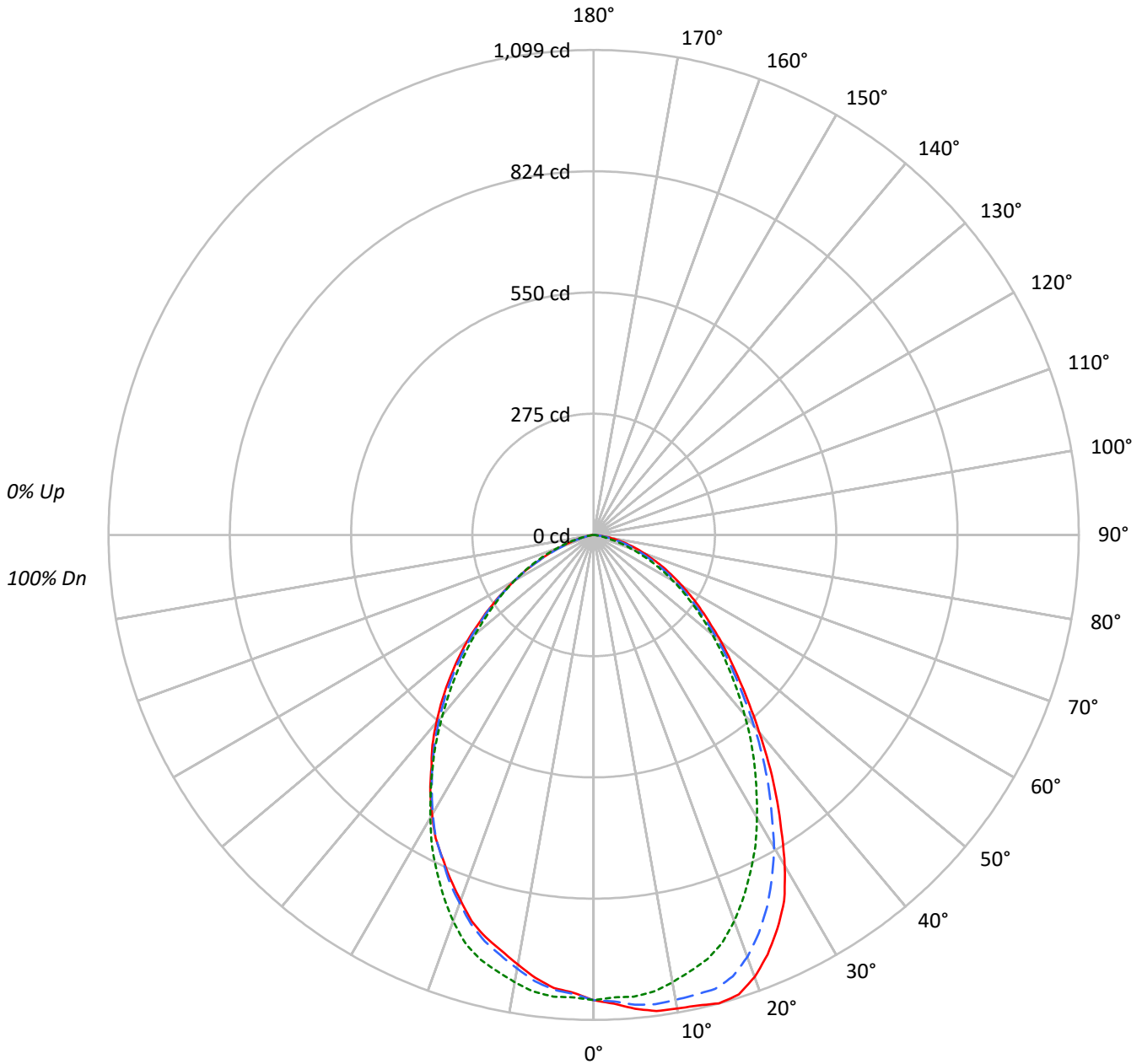
Lumens per Lamp: N/A  
Luminaire Lumens: 2009.4 lumens  
Efficiency: N/A  
Efficacy: 100.5 lumens/watt  
Spacing Criteria (0/90/45): 1.14 / 1.08 / 1.16  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

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: P580004  
CATALOG NUMBER: HCC4W20D010SL-HM40525830-41RWWH

### Luminous Intensity Polar Plot



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



TEST NUMBER: P580004

CATALOG NUMBER: HCC4W20D010SL-HM40525830-41RWWH

**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	50	30	10	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	111	107	104	100	108	105	102	99	101	98	96	97	95	93	93	92	90	88					88			
2	103	96	90	85	100	94	89	84	90	86	82	87	84	80	84	81	79	77					77			
3	95	86	79	73	92	84	78	73	81	76	71	79	74	70	76	72	69	67					67			
4	88	77	70	64	86	76	69	63	74	67	62	71	66	62	69	65	61	59					59			
5	81	70	62	56	79	69	61	56	67	60	55	65	59	55	63	58	54	52					52			
6	76	64	56	50	74	63	55	50	61	54	49	60	54	49	58	53	49	47					47			
7	71	58	51	45	69	58	50	45	56	49	45	55	49	44	54	48	44	42					42			
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38					38			
9	62	50	42	37	61	49	42	37	48	41	37	47	41	37	46	41	37	35					35			
10	58	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32					32			

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

	0°	90°	180°
0°	130031	130031	130031
5°	133450	130045	127618
10°	136471	128918	123833
15°	140313	127109	120571
20°	139925	122218	115694
25°	134028	114430	110143
30°	123285	105382	104271
35°	108461	95647	96430
40°	93840	85612	89203
45°	81549	76072	80625
50°	72362	67105	71614
55°	64213	58858	61396
60°	57183	51040	51040
65°	50842	42407	39722
70°	43926	32097	28346
75°	36839	21207	17490
80°	27916	10300	9305
85°	14718	3680	3680



TEST NUMBER: P580004  
 CATALOG NUMBER: HCC4W20D010SL-HM40525830-41RWWH

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	99.8	5.0
10°-20°	283.0	14.1
20°-30°	399.2	19.9
30°-40°	412.4	20.5
40°-50°	349.6	17.4
50°-60°	254.3	12.7
60°-70°	148.6	7.4
70°-80°	55.2	2.7
80°-90°	7.2	0.4
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°	782.1	38.9
0°-40°	1194.4	59.4
0°-60°	1798.3	89.5
0°-90°	2009.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2009.4	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1054	1054	1054	1054	1054	
5°	1078	1069	1050	1035	1031	103
15°	1099	1065	995	953	944	309
25°	985	930	841	811	809	450
35°	720	689	635	636	640	450
45°	468	454	436	452	462	364
55°	299	284	274	283	286	269
65°	174	160	145	136	136	173
75°	77	64	44	35	37	83
85°	10	6	3	3	3	15
90°	0	0	0	0	0	



TEST NUMBER: P580004

CATALOG NUMBER: HCC4W20D010SL-HM40525830-41RWWH

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	1054.2	1054.2	1054.2	1054.2	1054.2	1054.2	1054.2	1054.2	1054.2
2.5°	1063.4	1060.7	1058.2	1054.2	1049.0	1045.0	1041.1	1038.5	1038.5
5°	1077.8	1073.9	1068.7	1059.5	1050.3	1042.5	1034.6	1030.7	1030.7
7.5°	1088.3	1083.1	1072.6	1059.5	1043.8	1032.0	1020.1	1015.0	1012.3
10°	1089.6	1084.4	1069.9	1050.3	1029.3	1011.1	997.9	990.1	988.7
12.5°	1092.2	1085.6	1067.3	1039.9	1012.3	990.1	975.6	967.8	965.2
15°	1098.8	1089.6	1064.8	1029.3	995.4	969.1	953.4	946.8	944.2
17.5°	1092.2	1079.1	1049.0	1007.1	969.1	940.3	924.6	918.1	918.1
20°	1066.0	1052.9	1017.6	971.7	931.1	903.6	887.9	884.0	881.4
22.5°	1029.3	1015.0	977.0	928.5	887.9	863.0	852.6	847.3	846.0
25°	984.8	970.5	929.9	880.1	840.8	819.9	810.7	810.7	809.3
27.5°	935.0	916.7	874.8	831.6	793.6	777.9	774.0	774.0	775.3
30°	865.6	852.6	817.2	775.3	739.9	729.5	729.5	732.1	732.1
32.5°	791.0	781.8	750.4	713.8	686.3	679.7	682.4	687.5	688.9
35°	720.3	709.8	688.9	656.1	635.2	632.6	636.5	640.4	640.4
37.5°	650.9	640.4	626.0	599.8	584.1	585.4	590.6	595.9	599.8
40°	582.8	574.9	564.4	543.4	531.7	536.9	543.4	548.7	554.0
42.5°	522.6	514.7	506.9	491.1	483.2	489.8	497.7	502.8	508.1
45°	467.5	462.2	454.4	441.4	436.1	442.6	451.8	457.1	462.2
47.5°	420.4	417.7	407.3	395.5	392.8	399.4	407.3	413.8	417.7
50°	377.1	373.2	364.1	352.2	349.7	360.2	365.4	369.3	373.2
52.5°	335.3	331.4	320.8	310.4	310.4	318.3	322.2	323.5	327.4
55°	298.6	294.7	284.2	276.3	273.7	280.2	282.9	282.9	285.5
57.5°	264.5	260.6	250.2	241.0	239.6	243.6	243.6	243.6	244.9
60°	231.8	227.9	217.4	209.6	206.9	208.2	206.9	205.7	206.9
62.5°	201.6	197.7	187.3	178.1	175.5	175.5	171.6	170.2	171.6
65°	174.2	167.6	159.8	150.6	145.3	141.4	136.1	136.1	136.1
67.5°	146.7	141.4	132.2	123.1	116.5	110.0	102.2	104.7	106.1
70°	121.8	117.9	107.4	98.2	89.0	81.2	74.7	77.3	78.6
72.5°	99.6	94.3	85.1	74.7	66.8	56.3	52.4	55.1	55.1
75°	77.3	72.0	64.1	53.7	44.5	35.3	35.3	36.7	36.7
77.5°	57.6	52.4	44.5	35.3	27.5	21.0	22.3	22.3	22.3
80°	39.3	35.3	28.8	21.0	14.5	11.8	11.8	11.8	13.1
82.5°	22.3	19.6	15.7	10.4	6.5	6.5	6.5	6.5	6.5
85°	10.4	7.9	6.5	3.9	2.6	2.6	2.6	2.6	2.6
87.5°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
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)