

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: P580089

Luminaire Tested: **HCC4S20D010MW-HM40525935-41RWWH**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P580089  
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: HCC4S20D010MW-HM40525935-41RWWH  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, HAZE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT  
CYLINDER  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

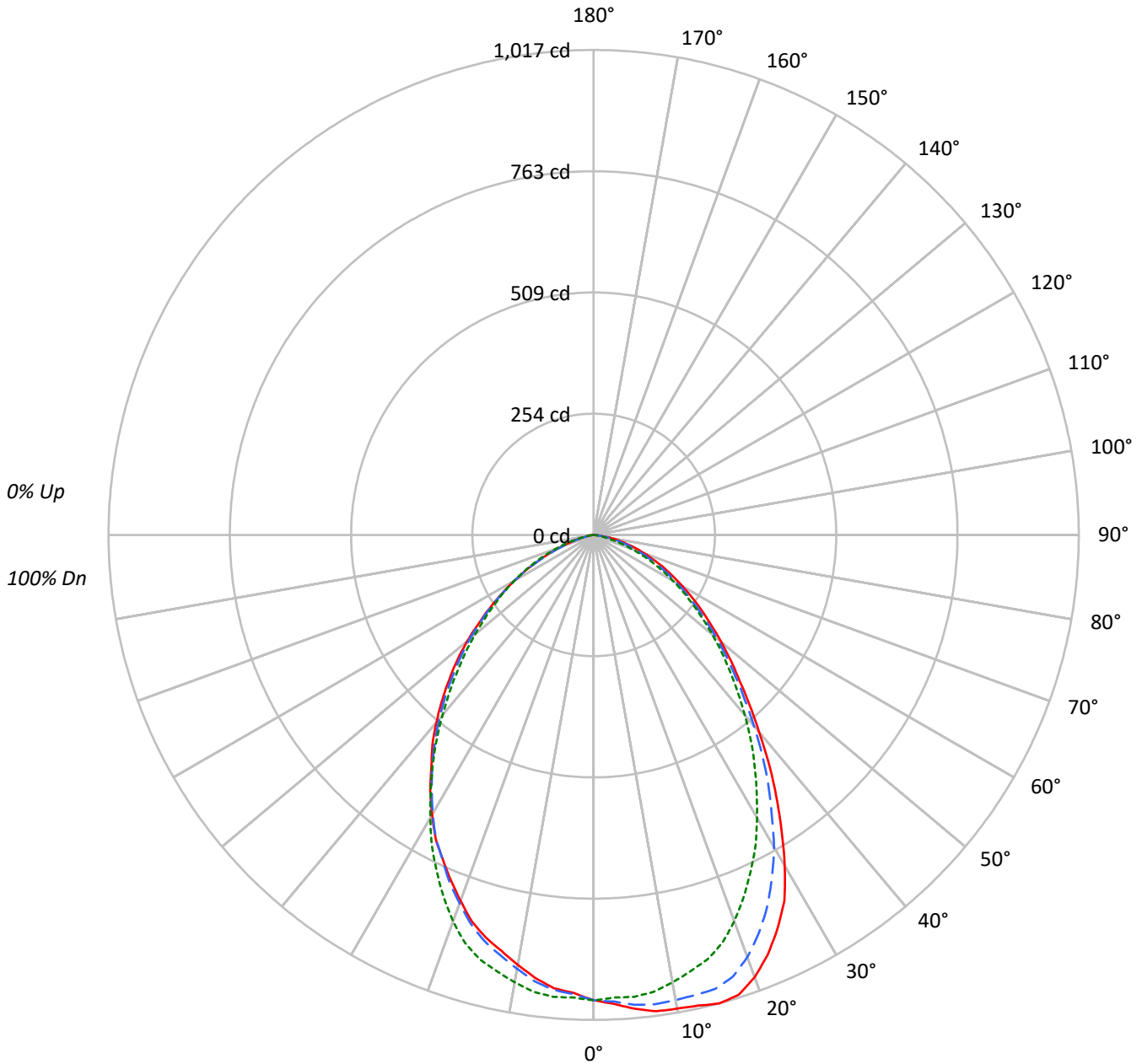
Lumens per Lamp: N/A  
Luminaire Lumens: 1860.1 lumens  
Efficiency: N/A  
Efficacy: 93.0 lumens/watt  
Spacing Criteria (0/90/45): 1.14 / 1.08 / 1.16  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

Input Watts (W): 20  
Input Voltage (V): NR  
Input Current (Ain): 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: P580089  
CATALOG NUMBER: HCC4S20D010MW-HM40525935-41RWWH

### Luminous Intensity Polar Plot



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



TEST NUMBER: P580089

CATALOG NUMBER: HCC4S20D010MW-HM40525935-41RWWH

**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°	120373	120373	120373
5°	123544	120387	118134
10°	126338	119349	114640
15°	129893	117660	111620
20°	129542	113148	107096
25°	124066	105938	101964
30°	114127	97563	96509
35°	100405	88539	89262
40°	86852	79252	82569
45°	75496	70420	74642
50°	66989	62115	66299
55°	59439	54493	56837
60°	52940	47241	47241
65°	47077	39255	36804
70°	40680	29753	26218
75°	34122	19635	16203
80°	25856	9447	8666
85°	13728	3397	3397



TEST NUMBER: P580089  
 CATALOG NUMBER: HCC4S20D010MW-HM40525935-41RWWH

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	92.4	5.0
10°-20°	262.0	14.1
20°-30°	369.5	19.9
30°-40°	381.7	20.5
40°-50°	323.6	17.4
50°-60°	235.4	12.7
60°-70°	137.6	7.4
70°-80°	51.1	2.7
80°-90°	6.7	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°	724.0	38.9
0°-40°	1105.7	59.4
0°-60°	1664.7	89.5
0°-90°	1860.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1860.1	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	976	976	976	976	976	
5°	998	989	972	958	954	96
15°	1017	986	921	883	874	286
25°	912	861	778	750	749	417
35°	667	638	588	589	593	416
45°	433	421	404	418	428	337
55°	276	263	253	262	264	249
65°	161	148	134	126	126	160
75°	72	59	41	33	34	77
85°	10	6	2	2	2	14
90°	0	0	0	0	0	



TEST NUMBER: P580089

CATALOG NUMBER: HCC4S20D010MW-HM40525935-41RWWH

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	975.9	975.9	975.9	975.9	975.9	975.9	975.9	975.9	975.9
2.5°	984.4	981.9	979.5	975.9	971.1	967.4	963.8	961.4	961.4
5°	997.8	994.1	989.3	980.8	972.3	965.0	957.7	954.1	954.1
7.5°	1007.4	1002.6	992.8	980.8	966.2	955.3	944.4	939.5	937.1
10°	1008.7	1003.7	990.4	972.3	952.9	936.0	923.8	916.5	915.3
12.5°	1011.1	1005.0	988.0	962.6	937.1	916.5	903.1	895.9	893.5
15°	1017.2	1008.7	985.6	952.9	921.4	897.1	882.6	876.5	874.1
17.5°	1011.1	998.9	971.1	932.3	897.1	870.5	855.9	849.8	849.8
20°	986.9	974.7	941.9	899.6	862.0	836.5	821.9	818.3	815.9
22.5°	952.9	939.5	904.4	859.6	821.9	798.9	789.3	784.3	783.2
25°	911.6	898.3	860.7	814.7	778.4	758.9	750.4	750.4	749.2
27.5°	865.6	848.7	809.8	769.9	734.7	720.1	716.5	716.5	717.7
30°	801.3	789.3	756.4	717.7	685.0	675.2	675.2	677.6	677.6
32.5°	732.2	723.8	694.6	660.7	635.2	629.2	631.7	636.5	637.7
35°	666.8	657.1	637.7	607.3	588.0	585.5	589.2	592.8	592.8
37.5°	602.5	592.8	579.5	555.3	540.7	542.0	546.8	551.6	555.3
40°	539.4	532.2	522.5	503.1	492.2	497.0	503.1	508.0	512.8
42.5°	483.7	476.5	469.1	454.7	447.3	453.4	460.6	465.6	470.4
45°	432.8	427.9	420.7	408.6	403.7	409.7	418.2	423.1	427.9
47.5°	389.2	386.8	377.0	366.1	363.7	369.8	377.0	383.1	386.8
50°	349.1	345.5	337.0	326.1	323.7	333.4	338.3	341.9	345.5
52.5°	310.4	306.7	297.1	287.3	287.3	294.5	298.2	299.5	303.0
55°	276.4	272.8	263.1	255.8	253.4	259.5	261.9	261.9	264.3
57.5°	244.9	241.2	231.6	223.1	221.8	225.5	225.5	225.5	226.6
60°	214.6	210.9	201.3	194.0	191.5	192.8	191.5	190.3	191.5
62.5°	186.7	183.1	173.3	164.8	162.4	162.4	158.9	157.6	158.9
65°	161.3	155.2	147.8	139.4	134.5	130.9	126.1	126.1	126.1
67.5°	135.8	130.9	122.5	114.0	107.9	101.9	94.5	97.0	98.2
70°	112.8	109.1	99.4	91.0	82.5	75.1	69.0	71.6	72.7
72.5°	92.1	87.3	78.8	69.0	61.8	52.1	48.5	50.9	50.9
75°	71.6	66.6	59.4	49.7	41.2	32.7	32.7	34.0	34.0
77.5°	53.3	48.5	41.2	32.7	25.5	19.4	20.6	20.6	20.6
80°	36.4	32.7	26.7	19.4	13.3	10.9	10.9	10.9	12.2
82.5°	20.6	18.2	14.6	9.7	6.1	6.1	6.1	6.1	6.1
85°	9.7	7.2	6.1	3.7	2.4	2.4	2.4	2.4	2.4
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)