

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: P580088

Luminaire Tested: **HCC4S20D010MB-HM40525935-41RWWC**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P580088  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-14)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/9/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HCC4S20D010MB-HM40525935-41RWWC  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, SPECULAR TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT  
CYLINDER  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

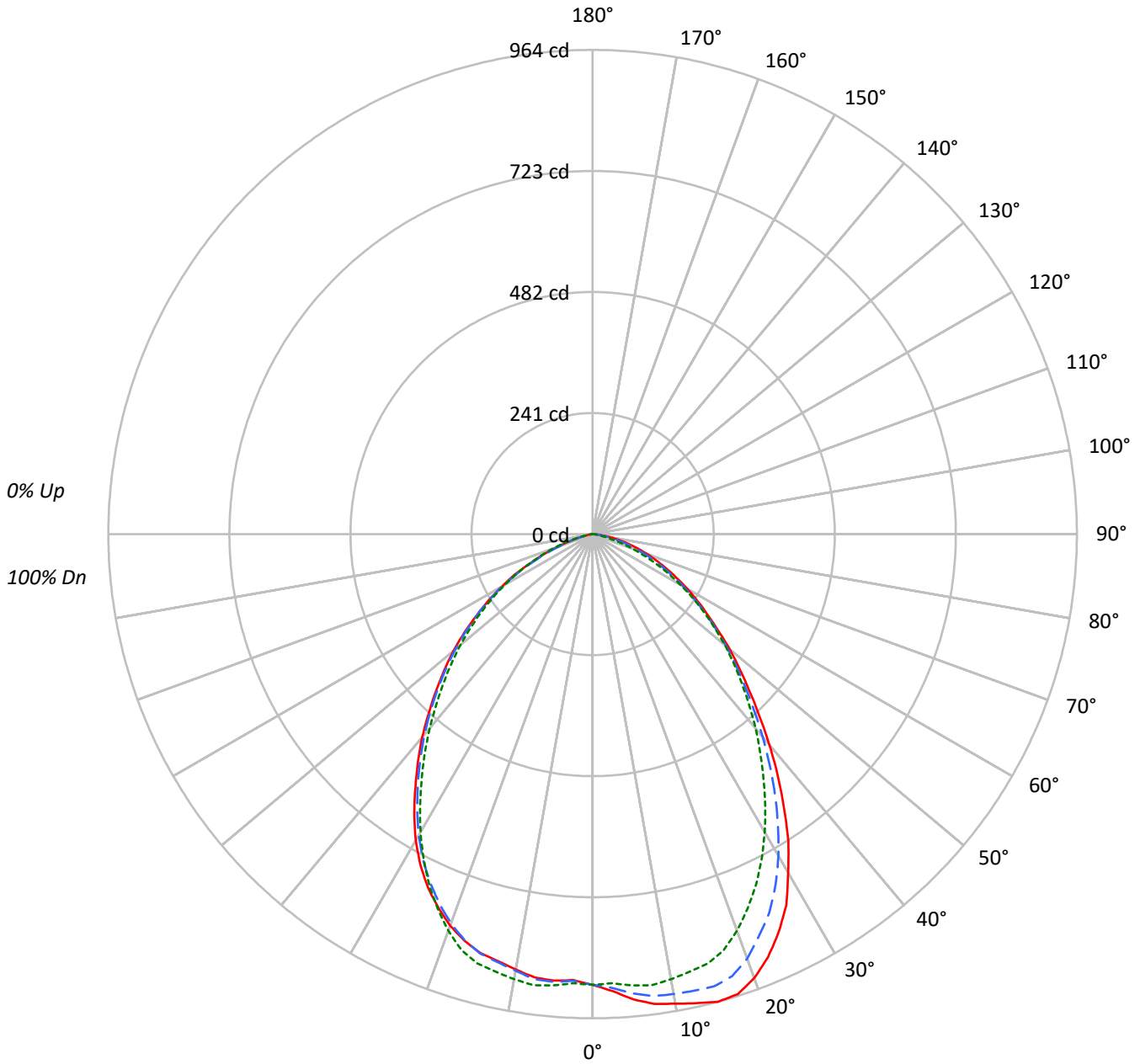
Lumens per Lamp: N/A  
Luminaire Lumens: 1869.8 lumens  
Efficiency: N/A  
Efficacy: 93.5 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.15 / 1.21  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

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: P580088  
CATALOG NUMBER: HCC4S20D010MB-HM40525935-41RWWC

### Luminous Intensity Polar Plot



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



TEST NUMBER: P580088

CATALOG NUMBER: HCC4S20D010MB-HM40525935-41RWWC

**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	111	107	103	100	108	105	102	99	101	98	96	97	95	93	93	92	90	88								
2	102	95	90	85	100	94	88	84	90	86	82	87	83	80	84	81	78	76								
3	95	85	78	73	92	84	77	72	81	75	71	78	74	70	76	72	69	67								
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	68	61	55	66	60	55	65	59	54	63	58	54	52								
6	75	63	55	49	74	62	55	49	61	54	49	59	53	48	58	52	48	46								
7	70	58	50	44	69	57	49	44	56	49	44	54	48	44	53	47	43	41								
8	66	53	45	40	64	53	45	40	51	44	40	50	44	39	49	43	39	37								
9	62	49	42	36	60	49	41	36	47	41	36	46	40	36	45	40	36	34								
10	58	46	38	33	57	45	38	33	44	38	33	43	37	33	42	37	33	31								

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

	0°	90°	180°
0°	110678	110678	110678
5°	115150	111695	110506
10°	118911	112686	110256
15°	123087	113024	110241
20°	123504	110299	108868
25°	119153	104795	105625
30°	110880	97577	100340
35°	99878	89277	92575
40°	88060	81233	84936
45°	76997	73194	76770
50°	68160	65857	69330
55°	59955	58127	60514
60°	53532	49659	51164
65°	47077	40335	39635
70°	41113	29753	27084
75°	34122	17919	14440
80°	25856	6890	4333
85°	12029	1840	1840



TEST NUMBER: P580088

CATALOG NUMBER: HCC4S20D010MB-HM40525935-41RWWC

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	86.5	4.6
10°-20°	252.6	13.5
20°-30°	365.8	19.6
30°-40°	385.9	20.6
40°-50°	334.0	17.9
50°-60°	247.4	13.2
60°-70°	142.6	7.6
70°-80°	49.8	2.7
80°-90°	5.3	0.3
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°	704.9	37.7
0°-40°	1090.8	58.3
0°-60°	1672.1	89.4
0°-90°	1869.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1869.8	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	897	897	897	897	897	
5°	930	918	902	895	892	89
15°	964	932	885	864	863	271
25°	876	832	770	765	776	401
35°	663	633	593	606	615	414
45°	441	429	420	435	440	343
55°	279	273	270	280	281	251
65°	161	152	138	131	136	161
75°	72	61	38	30	30	77
85°	8	5	1	1	1	13
90°	0	0	0	0	0	



TEST NUMBER: P580088

CATALOG NUMBER: HCC4S20D010MB-HM40525935-41RWWC

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	897.3	897.3	897.3	897.3	897.3	897.3	897.3	897.3	897.3
2.5°	910.6	908.2	904.5	899.7	894.9	891.2	890.0	888.8	888.8
5°	930.0	925.2	917.9	908.2	902.1	898.4	894.9	892.5	892.5
7.5°	943.4	938.5	927.6	914.3	905.8	898.4	893.6	890.0	890.0
10°	949.4	943.4	930.0	913.0	899.7	890.0	882.7	880.3	880.3
12.5°	956.7	949.4	931.2	909.5	892.5	880.3	873.0	870.6	870.6
15°	963.9	955.5	932.4	906.9	885.1	870.6	864.5	863.3	863.3
17.5°	960.4	949.4	922.8	892.5	868.2	853.6	847.5	847.5	848.8
20°	940.9	930.0	899.7	865.8	840.3	829.4	824.6	827.0	829.4
22.5°	911.9	898.4	865.8	833.1	806.3	796.6	796.6	800.3	803.9
25°	875.5	863.3	831.8	795.4	770.0	762.6	765.2	771.1	776.1
27.5°	834.2	820.9	788.1	754.2	728.7	725.1	731.2	739.7	742.1
30°	778.5	767.6	739.7	706.9	685.1	683.8	692.3	698.4	704.5
32.5°	725.1	713.0	686.3	654.8	639.0	640.3	649.9	657.2	660.8
35°	663.3	652.3	632.9	607.5	592.9	595.4	606.3	613.5	614.8
37.5°	605.0	597.8	578.4	558.9	548.0	553.0	562.6	571.1	571.1
40°	546.9	540.8	526.2	510.5	504.5	510.5	520.2	527.5	527.5
42.5°	491.0	487.5	475.3	464.4	460.7	469.2	477.7	483.8	482.5
45°	441.4	437.7	429.2	420.7	419.6	428.1	435.3	439.0	440.1
47.5°	396.5	394.1	386.8	380.7	380.7	389.2	395.3	398.9	400.2
50°	355.2	352.8	346.7	341.9	343.2	351.7	356.5	360.2	361.3
52.5°	314.0	312.8	308.0	301.9	305.6	311.6	317.7	320.1	321.3
55°	278.8	278.8	272.9	267.9	270.3	276.4	280.1	281.4	281.4
57.5°	247.4	246.1	238.9	234.0	235.2	241.3	243.7	244.9	244.9
60°	217.0	215.9	208.5	201.3	201.3	205.0	206.1	207.4	207.4
62.5°	188.0	186.7	178.2	172.2	169.8	168.5	168.5	171.0	175.8
65°	161.3	160.0	151.5	141.9	138.2	134.5	131.0	133.4	135.8
67.5°	137.1	134.5	126.1	117.6	109.1	103.1	97.0	100.6	105.5
70°	114.0	111.6	101.9	92.1	82.5	72.7	67.9	72.7	75.1
72.5°	92.1	89.7	80.1	70.3	58.2	48.5	47.3	48.5	49.7
75°	71.6	70.3	60.7	49.7	37.6	30.3	30.3	30.3	30.3
77.5°	53.3	50.9	41.2	31.5	21.8	17.0	15.7	15.7	15.7
80°	36.4	34.0	25.5	18.2	9.7	7.2	7.2	6.1	6.1
82.5°	20.6	19.4	13.3	7.2	3.7	2.4	2.4	2.4	2.4
85°	8.5	7.2	4.8	2.4	1.3	1.3	1.3	1.3	1.3
87.5°	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0
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)