

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: **HCC4S20D010BZ-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: HCC4S20D010BZ-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**

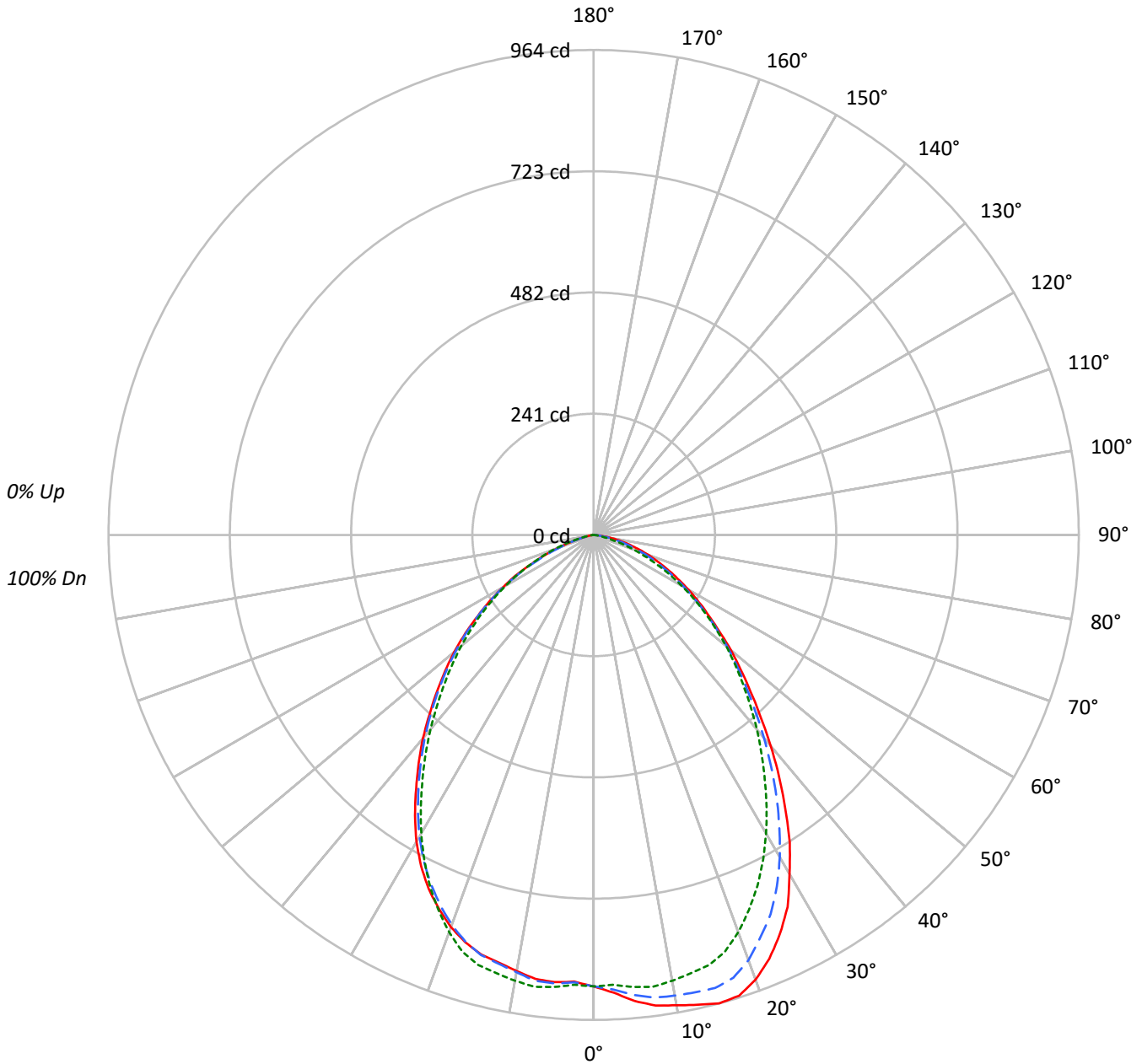
Lumens per Lamp: N/A  
Luminaire Lumens: 1869.8 lumens  
Efficiency: N/A  
Efficacy: 93.5 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.15 / 1.21  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

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



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### Luminous Intensity Polar Plot



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**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	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



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**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	



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**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

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Scaled Data Report



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— 0°-180°    - - 45°-225°    - - - - 90°-270°

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