

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: P580074

Luminaire Tested: **HCC4S20D010BZ-HM40525930-41WWWB**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P580074  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-18)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/9/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HCC4S20D010BZ-HM40525930-41WWWB  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, BLACK BAFFLE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT  
CYLINDER  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

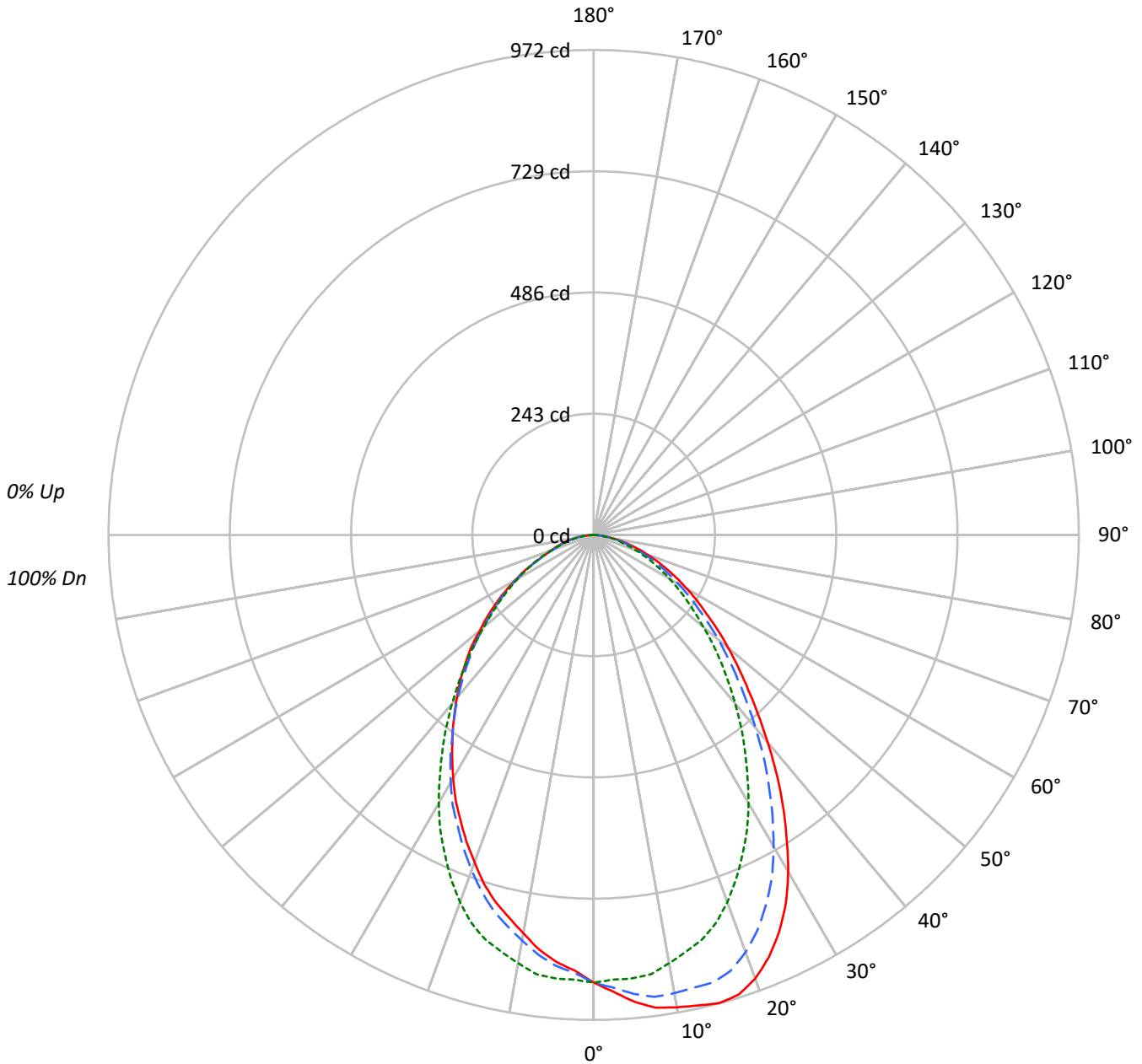
Lumens per Lamp: N/A  
Luminaire Lumens: 1739.4 lumens  
Efficiency: N/A  
Efficacy: 87.0 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.07 / 1.15  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

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	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	110	106	103	99	108	104	101	98	100	97	95	96	94	92	92	91	89	87								
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	75								
3	94	85	77	72	92	83	76	71	80	75	70	78	73	69	75	71	68	66								
4	87	76	68	62	85	75	68	62	72	66	61	70	65	60	68	63	60	58								
5	81	69	61	55	79	68	60	55	66	59	54	64	58	53	62	57	53	51								
6	75	63	55	49	73	62	54	49	60	53	48	59	53	48	57	52	47	46								
7	70	58	50	44	68	57	49	44	55	48	43	54	48	43	53	47	43	41								
8	65	53	45	40	64	52	45	40	51	44	39	50	44	39	49	43	39	37								
9	61	49	41	36	60	48	41	36	47	41	36	46	40	36	45	40	36	34								
10	58	45	38	33	57	45	38	33	44	38	33	43	37	33	42	37	33	31								

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

	0°	90°	180°
0°	110641	110641	110641
5°	116326	110482	106346
10°	120414	109167	101526
15°	124083	107189	97177
20°	124226	102765	91581
25°	119561	96044	85877
30°	111022	88376	80201
35°	99516	79565	74204
40°	87319	71008	68593
45°	76316	62867	63268
50°	67392	54996	57011
55°	59417	48773	51246
60°	53113	43171	44873
65°	47048	37971	37971
70°	41113	32385	32385
75°	35076	27450	30739
80°	27773	24506	27773
85°	17832	21087	26182



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	85.0	4.9
10°-20°	239.3	13.8
20°-30°	335.3	19.3
30°-40°	345.4	19.9
40°-50°	294.1	16.9
50°-60°	217.9	12.5
60°-70°	136.7	7.9
70°-80°	67.9	3.9
80°-90°	17.8	1.0
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°	659.5	37.9
0°-40°	1004.9	57.8
0°-60°	1516.9	87.2
0°-90°	1739.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1739.4	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	897	897	897	897	897	
5°	940	923	892	867	859	90
15°	972	928	839	778	761	273
25°	878	818	706	645	631	402
35°	661	611	528	494	493	412
45°	438	408	360	354	363	339
55°	276	254	227	232	238	250
65°	161	145	130	128	130	161
75°	74	66	58	62	64	79
85°	13	13	15	17	18	16
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°	897.0	897.0	897.0	897.0	897.0	897.0	897.0	897.0	897.0
2.5°	916.5	913.0	908.4	900.4	892.3	885.4	878.5	875.0	873.9
5°	939.5	932.6	923.3	908.4	892.3	878.5	867.0	861.2	858.9
7.5°	955.6	948.7	933.8	910.7	887.7	867.0	848.6	840.5	838.2
10°	961.4	953.3	932.6	901.5	871.6	846.3	825.5	815.2	810.6
12.5°	966.0	955.6	929.2	892.3	855.4	824.3	802.4	788.7	785.2
15°	971.7	960.3	928.0	883.1	839.4	802.4	778.4	765.6	761.0
17.5°	966.0	953.3	915.3	864.7	815.2	774.9	748.4	736.8	732.2
20°	946.4	932.6	890.0	835.9	782.9	741.4	715.0	703.5	697.7
22.5°	916.5	901.5	857.7	800.1	746.1	705.7	680.4	668.9	665.5
25°	878.5	863.5	817.5	758.7	705.7	666.6	644.7	634.4	631.0
27.5°	833.5	818.6	773.8	716.2	665.5	628.7	611.4	601.0	598.7
30°	779.5	764.5	720.8	667.8	620.5	586.0	572.2	564.2	563.1
32.5°	719.6	706.9	666.6	618.2	573.4	544.6	534.3	528.4	527.3
35°	660.9	647.0	611.4	567.7	528.4	503.2	493.9	492.8	492.8
37.5°	601.0	587.1	558.4	518.1	484.7	461.7	458.2	459.4	459.4
40°	542.3	529.6	504.3	471.0	441.0	423.7	422.6	424.8	426.0
42.5°	487.0	476.7	453.6	424.8	399.5	385.7	386.9	391.5	394.9
45°	437.5	428.3	407.5	382.3	360.4	350.1	353.5	359.2	362.7
47.5°	392.6	384.6	365.0	341.9	323.6	316.6	321.3	328.2	332.7
50°	351.2	344.2	325.9	301.7	286.6	282.0	287.8	294.8	297.1
52.5°	314.3	307.4	287.8	267.1	255.6	253.3	259.1	264.8	268.3
55°	276.3	270.6	254.4	236.1	226.8	225.6	231.5	236.1	238.3
57.5°	245.2	239.5	224.5	208.4	200.4	199.2	205.0	208.4	209.6
60°	215.3	209.6	195.7	180.8	175.0	175.0	178.5	180.8	181.9
62.5°	187.6	181.9	169.3	156.6	152.0	152.0	152.0	153.1	156.6
65°	161.2	156.6	145.1	133.5	130.1	127.8	127.8	127.8	130.1
67.5°	137.1	132.4	123.2	112.9	109.4	105.9	104.7	107.1	107.1
70°	114.0	110.6	101.3	93.3	89.8	86.4	85.2	89.8	89.8
72.5°	93.3	89.8	84.1	76.0	72.5	71.3	73.6	76.0	77.2
75°	73.6	70.2	65.6	61.0	57.6	58.7	62.2	63.3	64.5
77.5°	55.3	54.1	49.6	46.1	46.1	47.3	49.6	51.8	53.0
80°	39.1	38.0	35.7	33.4	34.5	36.8	38.0	40.3	39.1
82.5°	24.2	24.2	23.1	23.1	24.2	26.5	27.6	28.8	29.9
85°	12.6	12.6	12.6	13.8	14.9	16.2	17.3	18.5	18.5
87.5°	3.4	4.6	4.6	5.7	6.9	6.9	8.0	8.0	8.0
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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