

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: P580056

Luminaire Tested: **HCC4S20D010BZ-HM40525927-41WWWB**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P580056  
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-HM40525927-41WWWB  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, BLACK BAFFLE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT  
CYLINDER  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

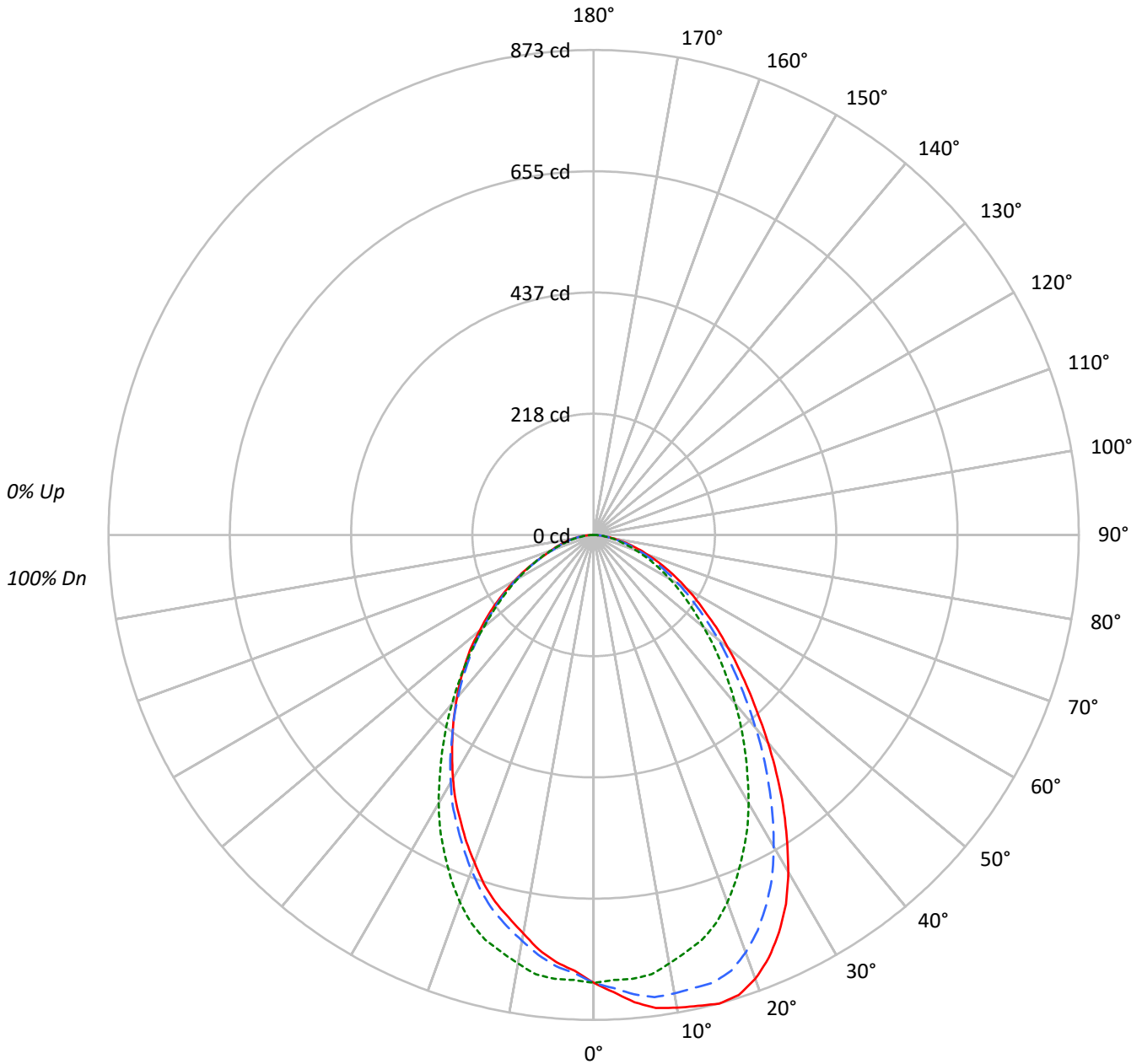
Lumens per Lamp: N/A  
Luminaire Lumens: 1563.4 lumens  
Efficiency: N/A  
Efficacy: 78.2 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.07 / 1.15  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

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					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	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°	99429	99429	99429
5°	104551	99301	95587
10°	108227	98120	91256
15°	111530	96334	87357
20°	111651	92369	82327
25°	107462	86340	77181
30°	99785	79446	72082
35°	89443	71524	66706
40°	78495	63827	61653
45°	68589	56500	56866
50°	60580	49450	51235
55°	53396	43826	46084
60°	47735	38805	40359
65°	42291	34148	34148
70°	36929	29104	29104
75°	31549	24639	27593
80°	25003	22091	25003
85°	16134	18964	23351



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	76.4	4.9
10°-20°	215.1	13.8
20°-30°	301.3	19.3
30°-40°	310.5	19.9
40°-50°	264.3	16.9
50°-60°	195.8	12.5
60°-70°	122.9	7.9
70°-80°	61.1	3.9
80°-90°	16.0	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°	592.8	37.9
0°-40°	903.3	57.8
0°-60°	1363.4	87.2
0°-90°	1563.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1563.4	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	806	806	806	806	806	
5°	844	830	802	779	772	81
15°	873	834	754	700	684	246
25°	790	735	634	580	567	361
35°	594	550	475	444	443	370
45°	393	366	324	318	326	305
55°	248	229	204	208	214	225
65°	145	130	117	115	117	145
75°	66	59	52	56	58	71
85°	11	11	13	16	16	15
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°	806.1	806.1	806.1	806.1	806.1	806.1	806.1	806.1	806.1
2.5°	823.8	820.7	816.5	809.2	802.0	795.8	789.6	786.5	785.5
5°	844.4	838.2	830.0	816.5	802.0	789.6	779.3	774.1	772.0
7.5°	859.0	852.7	839.3	818.6	797.9	779.3	762.6	755.4	753.3
10°	864.1	856.8	838.2	810.2	783.4	760.6	742.0	732.7	728.6
12.5°	868.3	859.0	835.1	802.0	768.9	741.0	721.3	708.8	705.7
15°	873.4	863.1	834.1	793.7	754.4	721.3	699.6	688.2	684.1
17.5°	868.3	856.8	822.7	777.2	732.7	696.5	672.7	662.3	658.1
20°	850.6	838.2	799.9	751.3	703.7	666.4	642.7	632.3	627.2
22.5°	823.8	810.2	771.0	719.3	670.5	634.4	611.6	601.3	598.2
25°	789.6	776.2	734.8	682.0	634.4	599.2	579.6	570.2	567.1
27.5°	749.2	735.8	695.4	643.7	598.2	565.0	549.5	540.2	538.2
30°	700.6	687.2	647.8	600.2	557.8	526.7	514.3	507.1	506.1
32.5°	646.8	635.4	599.2	555.7	515.3	489.5	480.1	475.0	473.9
35°	594.0	581.6	549.5	510.2	475.0	452.3	444.0	443.0	443.0
37.5°	540.2	527.7	501.9	465.7	435.6	415.0	411.9	412.9	412.9
40°	487.5	476.0	453.3	423.2	396.4	380.8	379.8	381.8	382.9
42.5°	437.7	428.4	407.8	381.8	359.1	346.6	347.8	351.9	355.0
45°	393.2	384.9	366.4	343.5	323.9	314.6	317.7	322.9	326.0
47.5°	352.9	345.6	328.0	307.4	290.8	284.6	288.7	294.9	299.0
50°	315.7	309.5	292.8	271.2	257.7	253.5	258.8	265.0	267.0
52.5°	282.5	276.3	258.8	240.1	229.7	227.7	232.8	238.0	241.1
55°	248.3	243.2	228.7	212.2	203.8	202.8	208.0	212.2	214.3
57.5°	220.5	215.3	201.8	187.3	180.1	179.0	184.2	187.3	188.3
60°	193.5	188.3	175.9	162.5	157.3	157.3	160.4	162.5	163.6
62.5°	168.7	163.6	152.1	140.7	136.6	136.6	136.6	137.6	140.7
65°	144.9	140.7	130.4	120.1	117.0	114.8	114.8	114.8	117.0
67.5°	123.2	119.1	110.7	101.4	98.3	95.2	94.2	96.2	96.2
70°	102.4	99.3	91.1	83.8	80.7	77.7	76.6	80.7	80.7
72.5°	83.8	80.7	75.6	68.2	65.1	64.1	66.2	68.2	69.3
75°	66.2	63.1	59.0	54.8	51.7	52.8	55.9	56.9	57.9
77.5°	49.7	48.6	44.5	41.4	41.4	42.4	44.5	46.6	47.6
80°	35.2	34.2	32.1	30.1	31.1	33.1	34.2	36.2	35.2
82.5°	21.7	21.7	20.6	20.6	21.7	23.9	24.9	25.9	27.0
85°	11.4	11.4	11.4	12.4	13.4	14.5	15.5	16.5	16.5
87.5°	3.1	4.1	4.1	5.2	6.2	6.2	7.2	7.2	7.2
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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