

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: P579987

Luminaire Tested: **HCC4W20D010BZ-HM40525827-41WWBB**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P579987  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-17)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/9/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HCC4W20D010BZ-HM40525827-41WWBB  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE BAFFLE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT CYLINDER  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

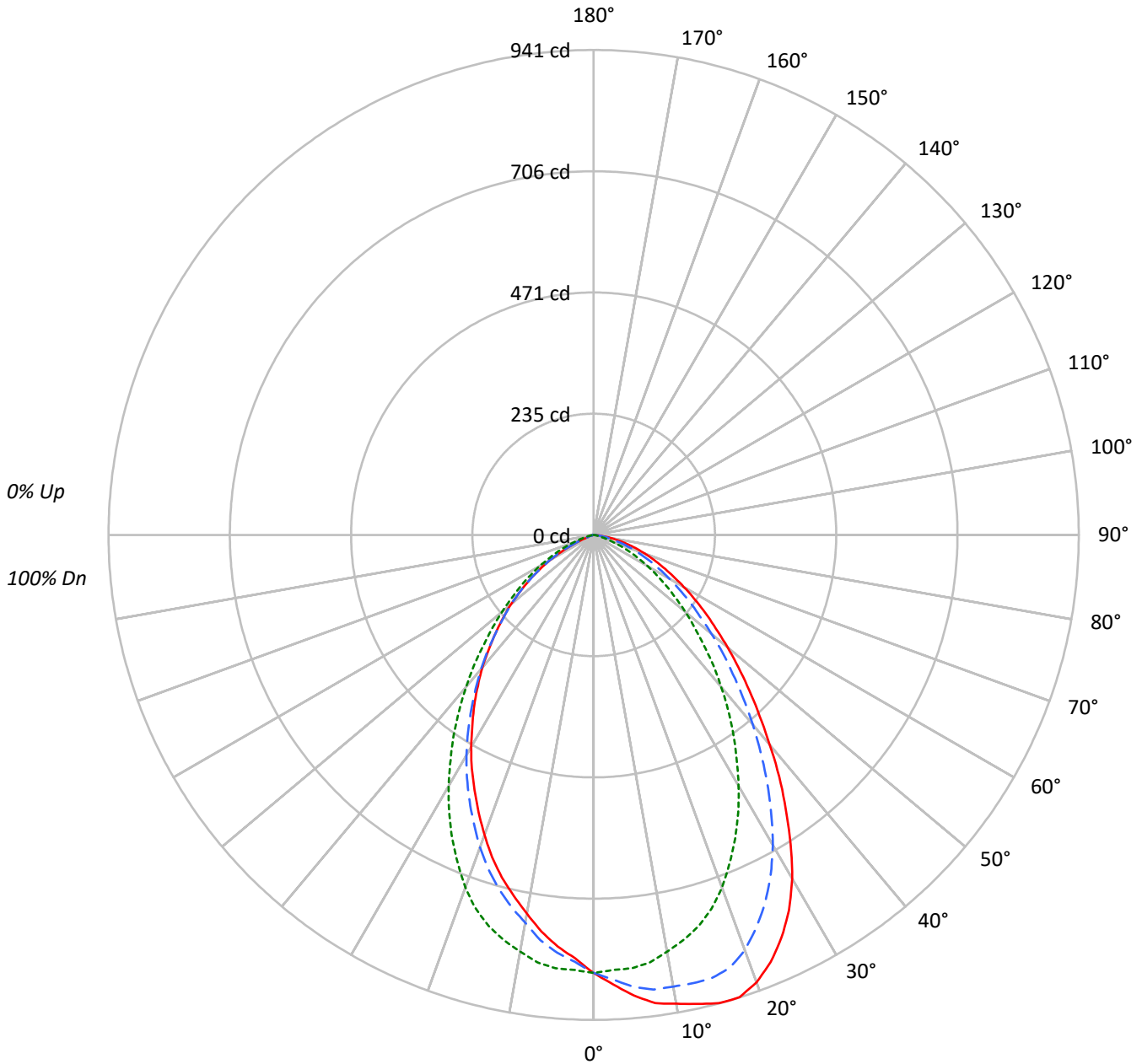
Lumens per Lamp: N/A  
Luminaire Lumens: 1468.2 lumens  
Efficiency: N/A  
Efficacy: 73.4 lumens/watt  
Spacing Criteria (0/90/45): 1.11 / 1.04 / 1.12  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

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									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	108	104	101	109	105	102	100	101	99	97	97	95	94	94	92	91	89																			
2	103	97	91	87	101	95	90	86	92	87	84	88	85	82	85	83	80	78																			
3	96	87	80	75	94	86	79	74	83	78	73	80	76	72	78	74	71	69																			
4	89	79	72	66	87	78	71	65	75	69	65	73	68	64	71	67	63	61																			
5	83	72	64	58	81	71	64	58	69	62	58	67	61	57	65	60	56	55																			
6	77	66	58	52	75	65	57	52	63	57	52	61	56	51	60	55	51	49																			
7	72	60	53	47	71	59	52	47	58	51	47	57	51	46	55	50	46	44																			
8	68	56	48	43	66	55	48	43	54	47	42	53	47	42	51	46	42	40																			
9	64	52	44	39	62	51	44	39	50	43	39	49	43	39	48	43	39	37																			
10	60	48	41	36	59	47	41	36	46	40	36	46	40	36	45	39	36	34																			

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

	0°	90°	180°
0°	104844	104844	104844
5°	111088	104501	99252
10°	115705	102829	93435
15°	120124	100357	87855
20°	121260	95545	81251
25°	117329	88368	74377
30°	109697	80087	67681
35°	97770	71193	60818
40°	85467	61911	54134
45°	74450	52523	46819
50°	64975	44557	40144
55°	56944	36923	32515
60°	49807	29825	23855
65°	43429	22240	13426
70°	37939	14389	4328
75°	31120	7482	1144
80°	23227	3410	923
85°	13586	1840	1840



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	80.2	5.5
10°-20°	224.5	15.3
20°-30°	310.4	21.1
30°-40°	312.2	21.3
40°-50°	251.9	17.2
50°-60°	170.3	11.6
60°-70°	86.7	5.9
70°-80°	27.7	1.9
80°-90°	4.3	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°	615.2	41.9
0°-40°	927.3	63.2
0°-60°	1349.5	91.9
0°-90°	1468.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1468.2	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	850	850	850	850	850	
5°	897	880	844	814	802	86
15°	941	890	786	711	688	265
25°	862	787	649	570	546	395
35°	649	586	473	414	404	406
45°	427	382	301	268	268	331
55°	265	228	172	150	151	238
65°	149	121	76	50	46	149
75°	65	46	16	4	2	70
85°	10	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°	850.0	850.0	850.0	850.0	850.0	850.0	850.0	850.0	850.0
2.5°	873.0	868.2	863.3	854.9	845.1	835.5	829.4	824.6	822.2
5°	897.2	891.1	880.2	862.1	844.0	827.0	813.7	805.3	801.6
7.5°	916.5	908.1	889.8	864.5	836.7	810.1	793.2	781.1	776.3
10°	923.8	914.0	889.8	856.0	821.0	788.3	764.1	752.1	746.0
12.5°	932.2	921.4	891.1	848.8	805.3	766.5	738.8	723.1	717.0
15°	940.7	926.2	889.8	837.9	785.9	741.2	710.9	695.2	688.0
17.5°	940.7	923.8	880.2	819.8	760.6	713.3	679.5	661.4	655.3
20°	923.8	904.4	857.3	790.7	727.9	677.1	644.5	626.3	619.0
22.5°	897.2	875.4	824.6	755.6	689.2	639.6	607.0	590.0	582.8
25°	862.1	840.3	787.1	715.8	649.3	599.8	569.5	553.8	546.5
27.5°	821.0	796.8	743.6	672.3	607.0	559.9	532.0	517.5	511.4
30°	770.2	747.3	695.2	625.1	562.3	518.7	493.3	480.0	475.2
32.5°	710.9	691.6	640.8	575.6	516.3	476.3	453.4	442.5	437.7
35°	649.3	631.2	586.5	526.0	472.8	435.3	413.5	406.3	403.9
37.5°	591.3	575.6	532.0	476.3	428.1	395.4	376.0	371.2	368.8
40°	530.8	519.9	480.0	429.2	384.5	355.5	339.7	336.2	336.2
42.5°	476.3	464.3	429.2	383.3	343.4	314.4	303.5	299.8	301.1
45°	426.8	414.8	382.1	339.7	301.1	276.9	268.4	268.4	268.4
47.5°	380.9	370.0	339.7	296.3	264.8	245.5	237.0	237.0	238.2
50°	338.6	331.3	297.4	259.9	232.2	214.0	208.0	206.8	209.2
52.5°	298.7	290.2	259.9	226.1	199.5	185.0	178.9	177.8	178.9
55°	264.8	255.1	228.5	195.9	171.7	157.1	149.9	148.8	151.2
57.5°	232.2	224.9	197.1	168.0	145.1	130.5	124.6	122.2	123.3
60°	201.9	194.6	169.3	141.4	120.9	106.4	98.0	95.5	96.7
62.5°	174.1	168.0	143.8	117.3	96.7	83.4	75.0	68.9	71.3
65°	148.8	142.7	120.9	94.3	76.2	61.7	49.6	44.7	46.0
67.5°	127.0	119.7	99.1	75.0	56.8	41.1	27.8	25.3	25.3
70°	105.2	98.0	79.8	58.0	39.9	21.8	12.0	12.0	12.0
72.5°	84.6	78.6	61.7	43.5	25.3	9.6	4.8	4.8	4.8
75°	65.3	60.4	46.0	30.3	15.7	4.8	3.7	2.4	2.4
77.5°	48.4	43.5	32.7	20.5	9.6	2.4	2.4	2.4	2.4
80°	32.7	29.0	21.8	12.0	4.8	1.3	1.3	1.3	1.3
82.5°	19.4	17.0	12.0	6.1	2.4	1.3	1.3	1.3	1.3
85°	9.6	7.2	4.8	2.4	1.3	1.3	1.3	1.3	1.3
87.5°	2.4	1.3	1.3	1.3	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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