

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: P580002

Luminaire Tested: **HCC4W20D010BZ-HM40525830-41WDW**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P580002  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-9)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/9/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HCC4W20D010BZ-HM40525830-41WDW  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WIDE DISTRIBUTION, WHITE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT CYLINDER  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

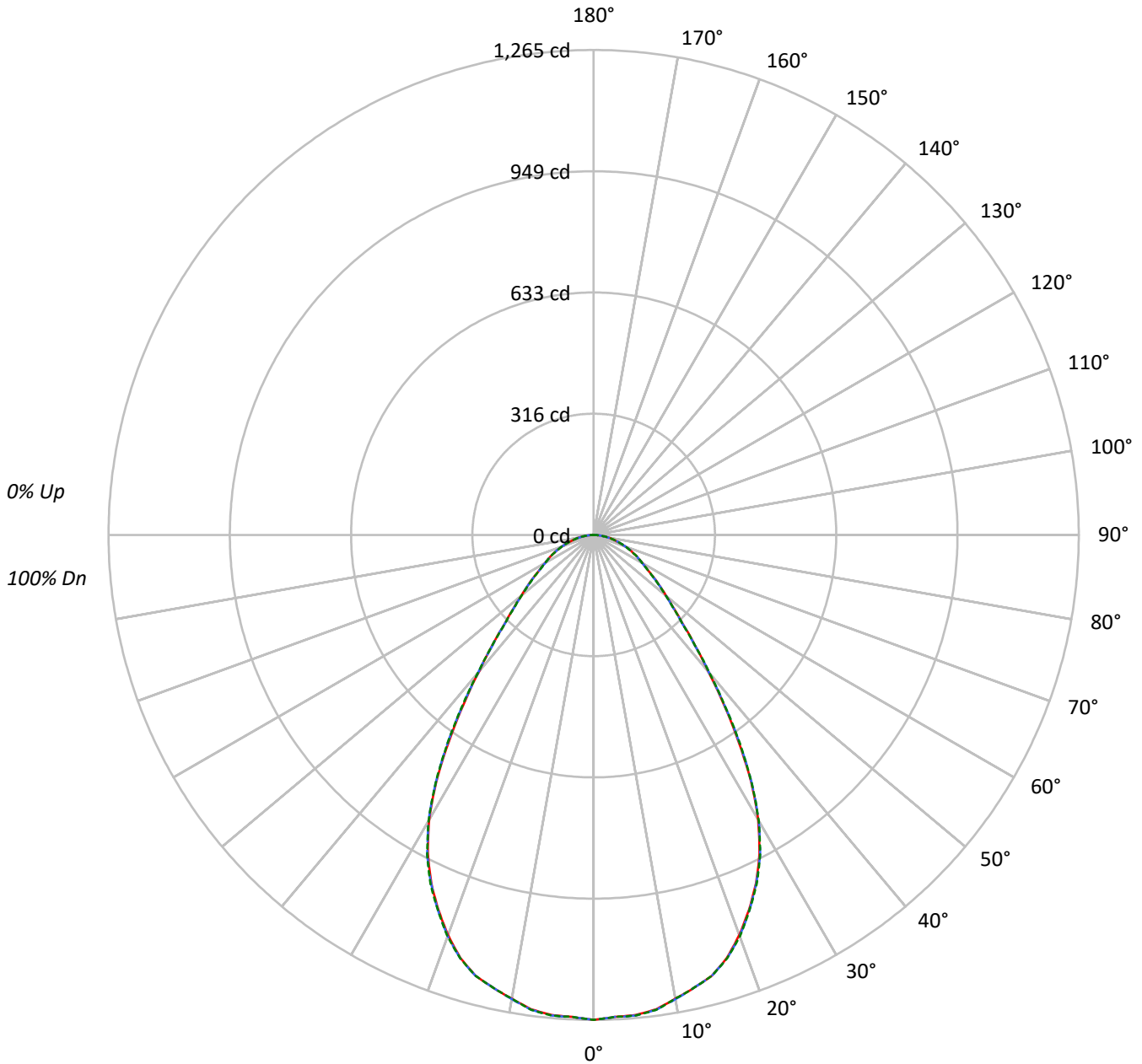
Lumens per Lamp: N/A  
Luminaire Lumens: 1951.8 lumens  
Efficiency: N/A  
Efficacy: 97.6 lumens/watt  
Spacing Criteria (0/90/45): 1.06 / 1.07 / 1.04  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

Input Watts (W): 20  
Input Voltage (V): NR  
Input Current (Ain): 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	104	101	108	105	102	99	101	98	96	97	95	93	94	92	90	89								
2	103	97	91	87	101	95	90	86	91	87	84	88	85	82	85	83	80	78								
3	96	87	81	76	94	86	80	75	83	78	74	81	76	72	78	74	71	69								
4	90	80	72	67	87	78	72	66	76	70	66	74	69	65	72	68	64	62								
5	84	73	65	60	82	72	65	59	70	64	59	68	63	58	66	62	58	56								
6	78	67	59	54	77	66	59	54	64	58	53	63	57	53	61	56	53	51								
7	73	62	54	49	72	61	54	49	60	53	49	58	53	48	57	52	48	46								
8	69	57	50	45	68	57	50	45	55	49	45	54	49	44	53	48	44	42								
9	65	53	46	41	64	53	46	41	52	45	41	51	45	41	50	45	41	39								
10	61	50	43	38	60	49	43	38	48	42	38	48	42	38	47	42	38	36								

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

	0°	45°	90°
0°	156032	156032	156032
5°	155650	155823	155823
10°	153843	154018	153843
15°	152010	152010	152010
20°	145766	146120	146278
25°	136342	136519	136873
30°	122160	122544	122544
35°	99185	99968	100179
40°	74856	75275	75484
45°	57337	57111	57111
50°	47225	46994	46994
55°	40558	40278	40278
60°	36190	35844	35844
65°	34002	34002	34002
70°	31628	31628	31628
75°	28690	29357	28690
80°	26992	26069	26992
85°	22219	22219	22219



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	119.2	6.1
10°-20°	333.5	17.1
20°-30°	458.3	23.5
30°-40°	412.1	21.1
40°-50°	260.4	13.3
50°-60°	170.0	8.7
60°-70°	115.2	5.9
70°-80°	64.8	3.3
80°-90°	18.2	0.9
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°	911.1	46.7
0°-40°	1323.2	67.8
0°-60°	1753.6	89.8
0°-90°	1951.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1951.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1265	1265	1265	1265	1265	
5°	1257	1257	1258	1258	1258	119
15°	1190	1190	1190	1190	1190	333
25°	1002	1003	1003	1006	1006	457
35°	659	661	664	666	665	410
45°	329	327	327	327	327	261
55°	189	189	187	189	187	171
65°	116	116	116	116	116	115
75°	60	62	62	62	60	65
85°	16	16	16	16	16	18
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1265.0	1265.0	1265.0	1265.0	1265.0
2.5°	1258.5	1258.5	1258.5	1258.5	1258.5
5°	1257.1	1257.1	1258.5	1258.5	1258.5
7.5°	1247.9	1249.3	1249.3	1249.3	1249.3
10°	1228.3	1228.3	1229.7	1229.7	1228.3
12.5°	1210.0	1210.0	1210.0	1211.3	1210.0
15°	1190.4	1190.4	1190.4	1190.4	1190.4
17.5°	1156.3	1157.7	1157.7	1157.7	1157.7
20°	1110.5	1113.2	1113.2	1114.4	1114.4
22.5°	1058.1	1059.4	1060.7	1062.0	1060.7
25°	1001.8	1003.1	1003.1	1005.7	1005.7
27.5°	936.3	937.7	940.2	940.2	940.2
30°	857.7	859.1	860.4	860.4	860.4
32.5°	764.8	764.8	767.3	768.7	767.3
35°	658.7	661.4	663.9	666.5	665.3
37.5°	557.9	560.5	561.8	561.8	563.1
40°	464.9	467.5	467.5	470.2	468.8
42.5°	391.6	390.2	390.2	392.8	391.6
45°	328.7	327.4	327.4	327.4	327.4
47.5°	282.9	281.6	281.6	281.6	281.6
50°	246.1	244.9	244.9	244.9	244.9
52.5°	216.1	214.7	214.7	214.7	213.5
55°	188.6	188.6	187.3	188.6	187.3
57.5°	163.7	163.7	163.7	163.7	163.7
60°	146.7	145.3	145.3	145.3	145.3
62.5°	131.0	131.0	131.0	131.0	131.0
65°	116.5	116.5	116.5	116.5	116.5
67.5°	102.2	100.8	102.2	102.2	100.8
70°	87.7	86.5	87.7	87.7	87.7
72.5°	73.3	73.3	73.3	74.7	73.3
75°	60.2	61.6	61.6	61.6	60.2
77.5°	48.4	49.8	48.4	48.4	48.4
80°	38.0	36.7	36.7	36.7	38.0
82.5°	26.2	26.2	26.2	26.2	26.2
85°	15.7	15.7	15.7	15.7	15.7
87.5°	6.5	6.5	6.5	6.5	6.5
90°	0.0	0.0	0.0	0.0	0.0

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

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