

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: P580006

Luminaire Tested: **HCC4S20D010BZ-HM40525830-41WWW**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P580006  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-16)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/9/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HCC4S20D010BZ-HM40525830-41WWW  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT  
CYLINDER  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

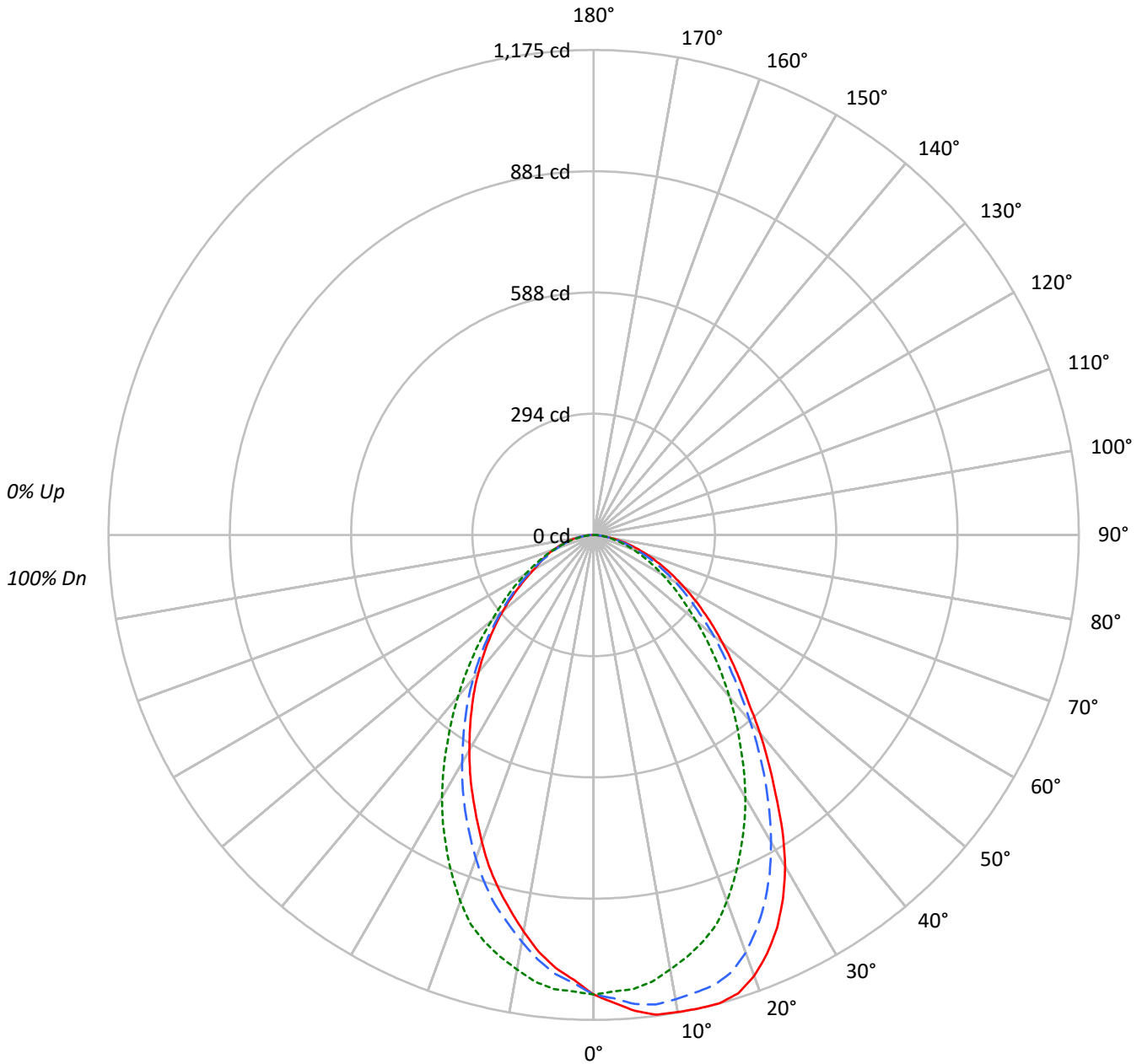
Lumens per Lamp: N/A  
Luminaire Lumens: 1988.5 lumens  
Efficiency: N/A  
Efficacy: 99.4 lumens/watt  
Spacing Criteria (0/90/45): 1.06 / 1.03 / 1.1  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

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	111	106	103	100	108	104	101	98	100	97	95	96	94	92	93	91	89	87								
2	102	95	89	84	100	93	88	83	90	85	81	87	83	80	84	81	78	76								
3	94	85	78	72	92	84	77	72	81	75	71	78	73	69	76	72	68	66								
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	69	61	56	67	60	55	65	59	54	63	58	54	52								
6	76	64	56	50	74	63	55	50	61	54	49	59	53	49	58	53	48	47								
7	71	58	50	45	69	58	50	45	56	49	44	55	49	44	53	48	44	42								
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38								
9	62	50	42	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35								
10	59	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32								

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

	0°	90°	180°
0°	137345	137345	137345
5°	143380	136731	130404
10°	147004	133878	122242
15°	150056	130315	113408
20°	149245	123964	103854
25°	142997	114648	94492
30°	132101	104670	85642
35°	115779	93102	77517
40°	100812	82263	69817
45°	87759	71746	62379
50°	78177	61847	55054
55°	69847	54364	47611
60°	62364	47513	41025
65°	55424	41678	38993
70°	48650	35920	36352
75°	41223	30596	33741
80°	31609	26069	30686
85°	18540	20521	26040



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	104.4	5.2
10°-20°	287.9	14.5
20°-30°	393.3	19.8
30°-40°	395.0	19.9
40°-50°	326.7	16.4
50°-60°	236.8	11.9
60°-70°	150.0	7.5
70°-80°	75.8	3.8
80°-90°	18.6	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°	785.6	39.5
0°-40°	1180.6	59.4
0°-60°	1744.1	87.7
0°-90°	1988.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1988.5	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1114	1114	1114	1114	1114	
5°	1158	1141	1104	1068	1053	111
15°	1175	1129	1020	926	888	331
25°	1051	981	842	736	694	480
35°	769	723	618	542	515	482
45°	503	474	411	371	358	391
55°	325	296	253	230	221	292
65°	190	169	143	128	134	189
75°	86	75	64	67	71	92
85°	13	13	14	17	18	18
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°	1113.5	1113.5	1113.5	1113.5	1113.5	1113.5	1113.5	1113.5	1113.5
2.5°	1134.5	1130.5	1123.9	1116.1	1107.0	1096.4	1087.2	1082.1	1079.4
5°	1158.0	1152.7	1141.0	1123.9	1104.3	1084.7	1067.6	1057.2	1053.2
7.5°	1172.5	1164.5	1147.6	1121.3	1091.3	1062.4	1037.5	1023.1	1019.1
10°	1173.7	1164.5	1142.3	1107.0	1068.9	1030.9	1000.9	979.9	976.0
12.5°	1175.1	1163.3	1135.8	1093.8	1046.6	999.5	962.8	937.9	931.4
15°	1175.1	1163.3	1129.2	1079.4	1020.5	966.8	926.2	897.3	888.1
17.5°	1164.5	1151.5	1110.9	1053.2	989.1	928.7	881.6	851.5	842.4
20°	1137.0	1122.7	1076.8	1013.9	944.4	881.6	834.4	803.0	791.2
22.5°	1097.8	1080.7	1032.3	964.2	894.7	830.5	784.7	752.0	741.4
25°	1050.7	1033.6	981.1	914.4	842.4	782.0	736.3	706.1	694.3
27.5°	993.0	974.6	923.6	856.7	789.9	729.6	687.7	660.2	648.4
30°	927.5	907.9	859.3	795.1	734.9	677.3	636.7	614.3	601.3
32.5°	851.5	834.4	791.2	733.6	677.3	622.2	588.2	568.6	558.0
35°	768.9	759.8	723.1	673.3	618.3	572.5	542.3	523.9	514.8
37.5°	695.5	686.5	654.9	613.1	564.6	522.7	497.8	482.1	474.2
40°	626.1	618.3	588.2	552.9	510.9	474.2	453.3	441.5	433.6
42.5°	558.0	554.1	529.2	496.5	459.8	428.4	411.3	402.1	395.6
45°	503.1	497.8	474.2	442.7	411.3	385.2	370.7	364.2	357.6
47.5°	454.6	448.0	423.1	395.6	366.8	343.2	330.1	323.6	320.9
50°	407.4	400.9	378.6	351.1	322.3	305.2	294.8	288.2	286.9
52.5°	365.4	358.9	334.0	307.9	285.6	271.2	262.0	255.4	252.8
55°	324.8	317.0	296.0	271.2	252.8	239.7	230.5	224.0	221.4
57.5°	288.2	280.3	262.0	238.5	221.4	209.6	201.8	195.2	192.6
60°	252.8	246.3	229.3	207.0	192.6	182.1	174.2	169.0	166.3
62.5°	220.1	214.8	197.9	178.1	166.3	157.3	150.6	145.4	148.1
65°	189.9	184.7	169.0	152.0	142.8	133.6	128.3	128.3	133.6
67.5°	161.2	155.9	142.8	128.3	120.5	114.0	110.0	114.0	117.9
70°	134.9	129.7	117.9	106.1	99.6	94.3	94.3	98.3	100.8
72.5°	110.0	104.8	95.7	86.5	81.2	77.3	81.2	83.8	86.5
75°	86.5	82.6	74.7	68.1	64.2	62.9	66.8	69.4	70.8
77.5°	64.2	61.6	56.3	51.0	48.5	49.8	53.7	55.1	56.3
80°	44.5	43.2	39.3	36.7	36.7	38.0	40.6	41.9	43.2
82.5°	27.5	27.5	24.9	23.6	24.9	27.5	28.8	30.2	30.2
85°	13.1	14.5	13.1	13.1	14.5	17.0	17.0	18.4	18.4
87.5°	3.9	3.9	5.3	5.3	6.5	6.5	6.5	6.5	7.9
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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