

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: P580108

Luminaire Tested: **HCC4W20D010BZ-HM40525940-41WWBB**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P580108  
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-HM40525940-41WWBB  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE BAFFLE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT  
CYLINDER  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

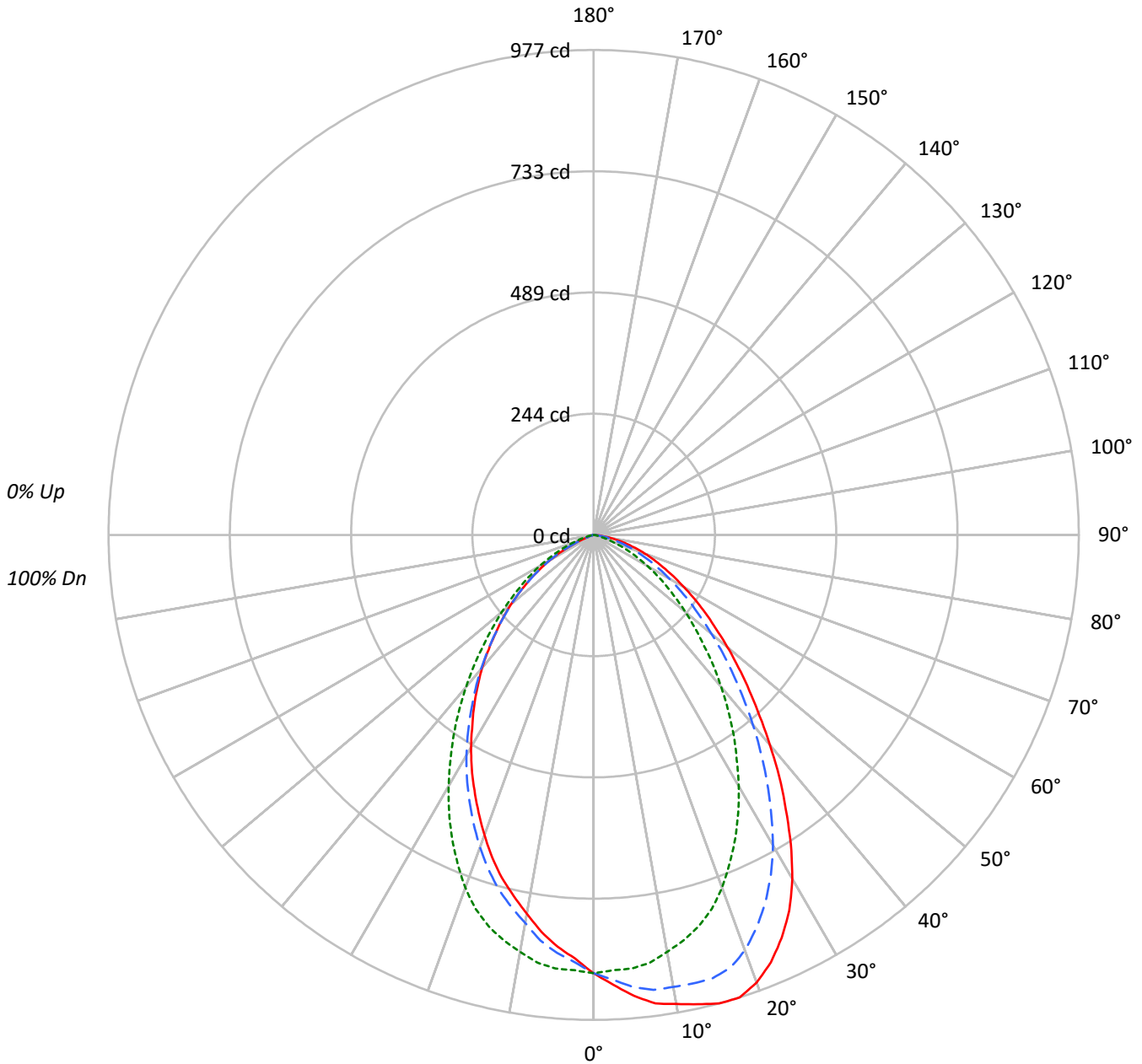
Lumens per Lamp: N/A  
Luminaire Lumens: 1525.4 lumens  
Efficiency: N/A  
Efficacy: 76.3 lumens/watt  
Spacing Criteria (0/90/45): 1.11 / 1.04 / 1.12  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

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					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	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°	108927	108927	108927
5°	115410	108563	103115
10°	120201	106824	97068
15°	124785	104264	91265
20°	125972	99260	84414
25°	121902	91811	77276
30°	113956	83206	70316
35°	101579	73948	63182
40°	88800	64326	56243
45°	77345	54564	48633
50°	67488	46284	41717
55°	59159	38364	33762
60°	51756	30984	24792
65°	45092	23086	13922
70°	39418	14930	4544
75°	32312	7768	1191
80°	24151	3552	923
85°	14294	1840	1840



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	83.3	5.5
10°-20°	233.3	15.3
20°-30°	322.5	21.1
30°-40°	324.3	21.3
40°-50°	261.7	17.2
50°-60°	176.9	11.6
60°-70°	90.1	5.9
70°-80°	28.8	1.9
80°-90°	4.4	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°	639.1	41.9
0°-40°	963.4	63.2
0°-60°	1402.0	91.9
0°-90°	1525.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1525.4	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	883	883	883	883	883	
5°	932	914	877	845	833	90
15°	977	924	816	739	715	275
25°	896	818	675	592	568	410
35°	675	609	491	430	420	422
45°	443	397	313	279	279	344
55°	275	237	178	156	157	247
65°	154	126	79	52	48	155
75°	68	48	16	4	2	73
85°	10	5	1	1	1	14
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°	883.1	883.1	883.1	883.1	883.1	883.1	883.1	883.1	883.1
2.5°	906.9	901.9	896.8	888.1	878.0	868.0	861.7	856.7	854.2
5°	932.1	925.7	914.5	895.7	876.8	859.2	845.3	836.6	832.8
7.5°	952.1	943.4	924.5	898.1	869.3	841.7	824.0	811.5	806.5
10°	959.7	949.6	924.5	889.4	852.9	819.0	793.8	781.3	775.0
12.5°	968.5	957.2	925.7	881.8	836.6	796.4	767.5	751.2	744.9
15°	977.2	962.2	924.5	870.5	816.5	770.0	738.7	722.3	714.7
17.5°	977.2	959.7	914.5	851.6	790.2	741.1	706.0	687.2	680.9
20°	959.7	939.6	890.6	821.5	756.2	703.5	669.5	650.7	643.1
22.5°	932.1	909.5	856.7	785.1	716.0	664.5	630.6	613.0	605.5
25°	895.7	873.0	817.8	743.6	674.6	623.1	591.6	575.3	567.8
27.5°	852.9	827.8	772.5	698.4	630.6	581.6	552.7	537.6	531.4
30°	800.1	776.3	722.3	649.4	584.2	538.9	512.5	498.7	493.7
32.5°	738.7	718.5	665.7	597.9	536.3	494.9	471.1	459.7	454.7
35°	674.6	655.7	609.3	546.4	491.1	452.3	429.6	422.1	419.6
37.5°	614.2	597.9	552.7	494.9	444.7	410.7	390.7	385.6	383.1
40°	551.5	540.1	498.7	446.0	399.5	369.3	352.9	349.3	349.3
42.5°	494.9	482.3	446.0	398.2	356.7	326.6	315.3	311.5	312.8
45°	443.4	430.8	397.0	352.9	312.8	287.7	278.8	278.8	278.8
47.5°	395.7	384.4	352.9	307.7	275.1	255.0	246.3	246.3	247.4
50°	351.7	344.2	309.0	270.1	241.2	222.3	216.1	214.8	217.4
52.5°	310.3	301.4	270.1	234.9	207.3	192.2	185.9	184.7	185.9
55°	275.1	265.1	237.4	203.5	178.4	163.3	155.8	154.5	157.0
57.5°	241.2	233.6	204.7	174.6	150.7	135.7	129.4	126.9	128.1
60°	209.8	202.2	175.8	146.9	125.6	110.6	101.7	99.2	100.5
62.5°	180.9	174.6	149.5	121.8	100.5	86.7	77.9	71.6	74.1
65°	154.5	148.2	125.6	98.0	79.1	64.1	51.5	46.5	47.7
67.5°	131.9	124.3	103.0	77.9	59.1	42.7	28.9	26.4	26.4
70°	109.3	101.7	82.9	60.3	41.4	22.6	12.6	12.6	12.6
72.5°	88.0	81.7	64.1	45.2	26.4	10.1	5.0	5.0	5.0
75°	67.8	62.9	47.7	31.4	16.3	5.0	3.8	2.5	2.5
77.5°	50.2	45.2	34.0	21.3	10.1	2.5	2.5	2.5	2.5
80°	34.0	30.2	22.6	12.6	5.0	1.3	1.3	1.3	1.3
82.5°	20.1	17.5	12.6	6.3	2.5	1.3	1.3	1.3	1.3
85°	10.1	7.6	5.0	2.5	1.3	1.3	1.3	1.3	1.3
87.5°	2.5	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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