

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: P580090

Luminaire Tested: **HCC4W20D010SL-HM40525935-41WWBB**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P580090  
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: HCC4W20D010SL-HM40525935-41WWBB  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE BAFFLE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT  
CYLINDER  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

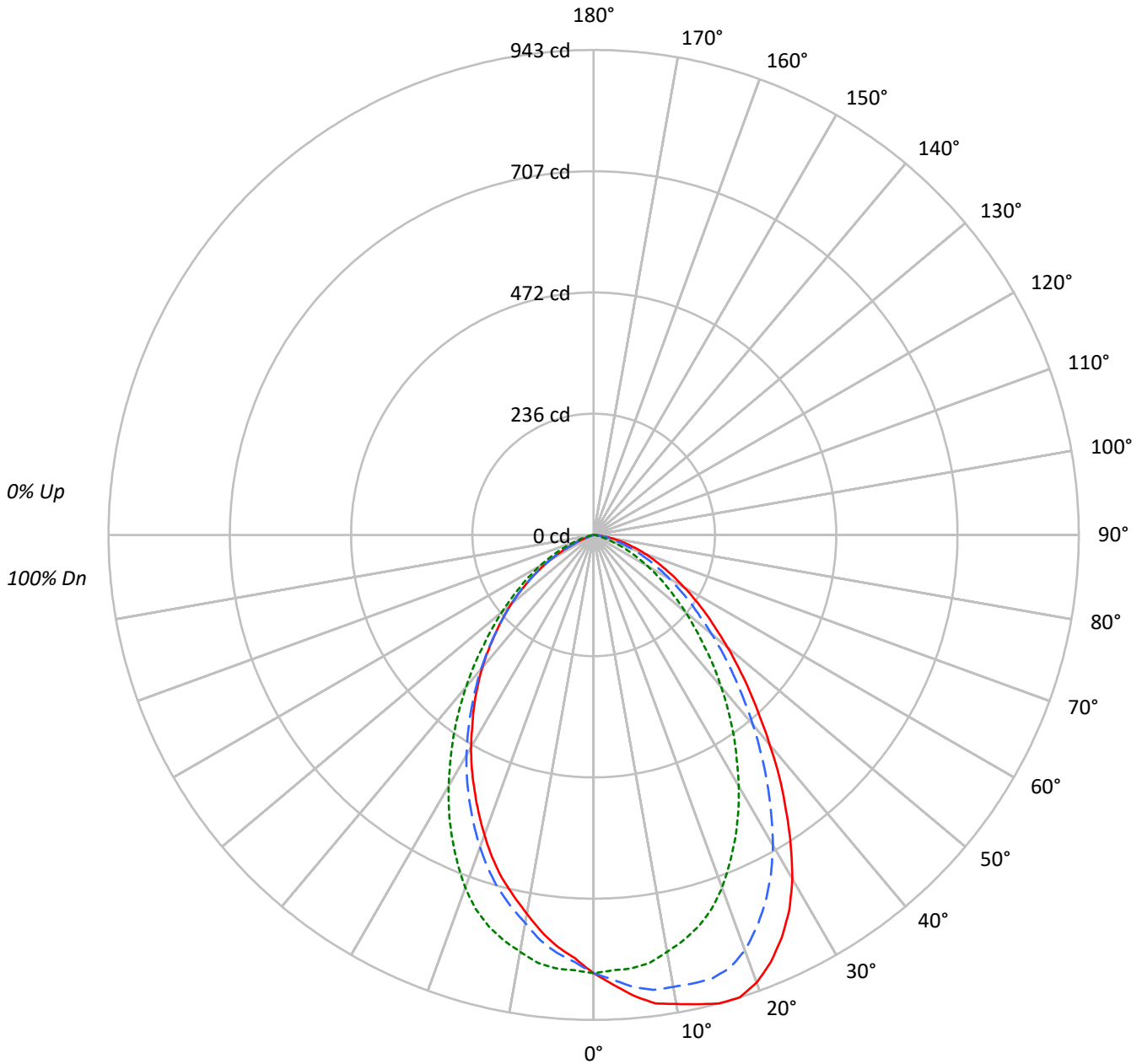
Lumens per Lamp: N/A  
Luminaire Lumens: 1472.1 lumens  
Efficiency: N/A  
Efficacy: 73.6 lumens/watt  
Spacing Criteria (0/90/45): 1.11 / 1.04 / 1.12  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

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					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	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°	105115	105115	105115
5°	111373	104761	99512
10°	116005	103092	93686
15°	120444	100625	88085
20°	121575	95795	81461
25°	117642	88599	74567
30°	109997	80300	67867
35°	98026	71389	60969
40°	85693	62072	54262
45°	74642	52663	46941
50°	65128	44653	40240
55°	57095	37031	32580
60°	49930	29899	23929
65°	43516	22298	13455
70°	38047	14426	4400
75°	31215	7482	1144
80°	23227	3410	923
85°	13728	1840	1840



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	80.4	5.5
10°-20°	225.1	15.3
20°-30°	311.3	21.1
30°-40°	313.0	21.3
40°-50°	252.5	17.2
50°-60°	170.8	11.6
60°-70°	86.9	5.9
70°-80°	27.8	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°	616.8	41.9
0°-40°	929.8	63.2
0°-60°	1353.1	91.9
0°-90°	1472.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1472.1	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	852	852	852	852	852	
5°	900	882	846	816	804	87
15°	943	892	788	713	690	266
25°	864	789	651	571	548	396
35°	651	588	474	415	405	407
45°	428	383	302	269	269	332
55°	266	229	172	150	152	239
65°	149	121	76	50	46	150
75°	66	46	16	4	2	71
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°	852.2	852.2	852.2	852.2	852.2	852.2	852.2	852.2	852.2
2.5°	875.3	870.5	865.5	857.0	847.4	837.7	831.6	826.8	824.3
5°	899.5	893.5	882.5	864.4	846.1	829.2	815.9	807.4	803.7
7.5°	918.9	910.4	892.3	866.8	838.9	812.2	795.2	783.2	778.2
10°	926.2	916.5	892.3	858.3	823.1	790.4	766.2	754.0	748.0
12.5°	934.7	923.8	893.5	851.1	807.4	768.6	740.7	724.9	718.9
15°	943.2	928.6	892.3	840.1	788.0	743.1	712.9	697.0	689.8
17.5°	943.2	926.2	882.5	821.9	762.5	715.3	681.3	663.1	657.1
20°	926.2	906.8	859.6	792.8	729.8	678.9	646.1	628.0	620.6
22.5°	899.5	877.7	826.8	757.7	691.0	641.3	608.6	591.6	584.3
25°	864.4	842.6	789.3	717.7	651.0	601.3	571.0	555.3	547.9
27.5°	823.1	798.9	745.6	674.0	608.6	561.3	533.4	518.9	512.8
30°	772.3	749.2	697.0	626.7	563.8	520.0	494.6	481.3	476.5
32.5°	712.9	693.5	642.5	577.1	517.6	477.6	454.6	443.7	438.8
35°	651.0	632.8	588.0	527.4	474.1	436.4	414.6	407.3	404.9
37.5°	592.8	577.1	533.4	477.6	429.2	396.4	377.0	372.2	369.8
40°	532.2	521.3	481.3	430.4	385.5	356.4	340.7	337.0	337.0
42.5°	477.6	465.6	430.4	384.2	344.3	315.2	304.3	300.6	301.9
45°	427.9	415.8	383.1	340.7	301.9	277.6	269.1	269.1	269.1
47.5°	381.8	370.9	340.7	297.0	265.5	246.1	237.7	237.7	238.8
50°	339.4	332.2	298.2	260.6	232.7	214.6	208.5	207.3	209.7
52.5°	299.5	291.0	260.6	226.6	200.0	185.5	179.4	178.2	179.4
55°	265.5	255.8	229.2	196.4	172.2	157.6	150.4	149.1	151.5
57.5°	232.7	225.5	197.6	168.5	145.4	130.9	124.9	122.4	123.6
60°	202.4	195.2	169.8	141.9	121.2	106.7	98.2	95.8	97.0
62.5°	174.6	168.5	144.3	117.6	97.0	83.6	75.1	69.0	71.6
65°	149.1	143.0	121.2	94.5	76.4	61.8	49.7	44.8	46.1
67.5°	127.3	120.0	99.4	75.1	57.0	41.2	27.9	25.5	25.5
70°	105.5	98.2	80.1	58.2	40.0	21.8	12.2	12.2	12.2
72.5°	84.9	78.8	61.8	43.6	25.5	9.7	4.8	4.8	4.8
75°	65.5	60.6	46.1	30.3	15.7	4.8	3.7	2.4	2.4
77.5°	48.5	43.6	32.7	20.6	9.7	2.4	2.4	2.4	2.4
80°	32.7	29.1	21.8	12.2	4.8	1.3	1.3	1.3	1.3
82.5°	19.4	17.0	12.2	6.1	2.4	1.3	1.3	1.3	1.3
85°	9.7	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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