

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: P579989

Luminaire Tested: **HCC4W20D010MB-HM40525827-41WWWB**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P579989  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-18)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/9/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HCC4W20D010MB-HM40525827-41WWWB  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, BLACK BAFFLE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT  
CYLINDER  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

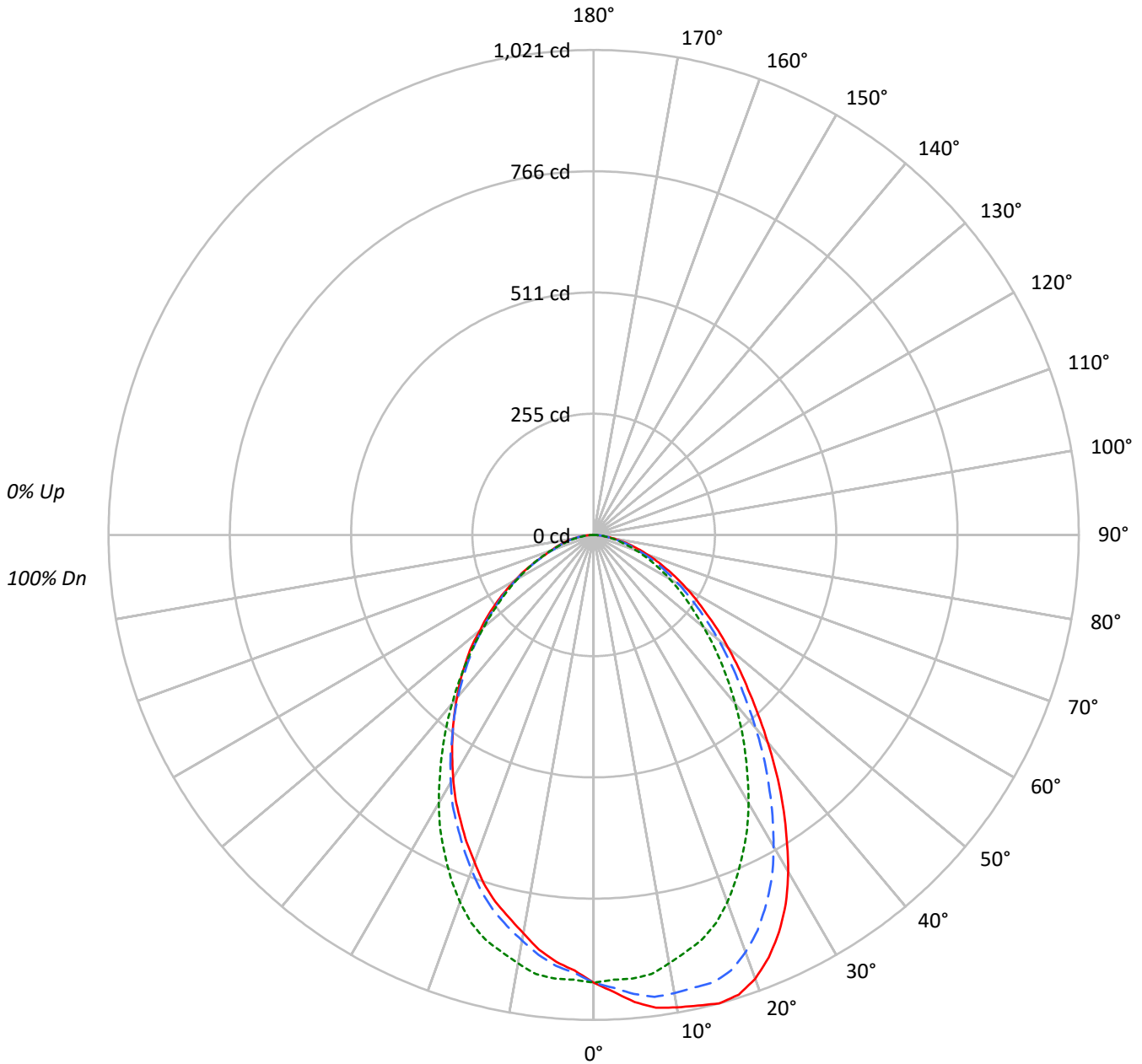
Lumens per Lamp: N/A  
Luminaire Lumens: 1827.4 lumens  
Efficiency: N/A  
Efficacy: 91.4 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.07 / 1.15  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

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	110	106	103	99	108	104	101	98	100	97	95	96	94	92	92	91	89	87								
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	75								
3	94	85	77	72	92	83	76	71	80	75	70	78	73	69	75	71	68	66								
4	87	76	68	62	85	75	68	62	72	66	61	70	65	60	68	63	60	58								
5	81	69	61	55	79	68	60	55	66	59	54	64	58	53	62	57	53	51								
6	75	63	55	49	73	62	54	49	60	53	48	59	53	48	57	52	47	46								
7	70	58	50	44	68	57	49	44	55	48	43	54	48	43	53	47	43	41								
8	65	53	45	40	64	52	45	40	51	44	39	50	44	39	49	43	39	37								
9	61	49	41	36	60	48	41	36	47	41	36	46	40	36	45	40	36	34								
10	58	45	38	33	57	45	38	33	44	38	33	43	37	33	42	37	33	31								

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

	0°	90°	180°
0°	116229	116229	116229
5°	122207	116066	111720
10°	126501	114690	106649
15°	130366	112603	102106
20°	130513	107963	96215
25°	125604	100916	90219
30°	116619	92863	84246
35°	104546	83616	77969
40°	91731	74599	72071
45°	80171	66042	66461
50°	70789	57798	59889
55°	62428	51246	53848
60°	55802	45367	47143
65°	49412	39897	39897
70°	43168	34044	34044
75°	36887	28785	32312
80°	29265	25714	29265
85°	18823	22219	27456



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	89.3	4.9
10°-20°	251.4	13.8
20°-30°	352.2	19.3
30°-40°	362.9	19.9
40°-50°	308.9	16.9
50°-60°	228.9	12.5
60°-70°	143.7	7.9
70°-80°	71.4	3.9
80°-90°	18.7	1.0
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°	692.9	37.9
0°-40°	1055.8	57.8
0°-60°	1593.6	87.2
0°-90°	1827.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1827.4	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	942	942	942	942	942	
5°	987	970	937	911	902	95
15°	1021	975	882	818	800	287
25°	923	859	742	677	663	422
35°	694	642	555	519	518	433
45°	460	428	379	371	381	357
55°	290	267	238	243	250	262
65°	169	152	137	134	137	169
75°	77	69	60	65	68	83
85°	13	13	16	18	19	17
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°	942.3	942.3	942.3	942.3	942.3	942.3	942.3	942.3	942.3
2.5°	962.8	959.2	954.4	945.9	937.4	930.2	922.9	919.3	918.1
5°	987.0	979.8	970.1	954.4	937.4	922.9	910.8	904.8	902.3
7.5°	1004.0	996.7	981.0	956.8	932.6	910.8	891.4	883.0	880.6
10°	1010.0	1001.6	979.8	947.1	915.7	889.0	867.2	856.4	851.5
12.5°	1014.9	1004.0	976.1	937.4	898.7	866.1	843.0	828.6	824.9
15°	1020.9	1008.8	975.0	927.8	881.8	843.0	817.7	804.4	799.6
17.5°	1014.9	1001.6	961.6	908.4	856.4	814.0	786.3	774.1	769.3
20°	994.3	979.8	935.0	878.1	822.5	778.9	751.2	739.0	733.0
22.5°	962.8	947.1	901.2	840.6	783.9	741.5	714.9	702.8	699.1
25°	922.9	907.2	858.8	797.2	741.5	700.4	677.4	666.5	662.9
27.5°	875.7	860.0	812.9	752.3	699.1	660.4	642.3	631.4	629.0
30°	818.8	803.1	757.2	701.6	652.0	615.7	601.1	592.7	591.5
32.5°	756.0	742.7	700.4	649.5	602.4	572.1	561.2	555.3	554.0
35°	694.3	679.8	642.3	596.3	555.3	528.5	518.9	517.8	517.8
37.5°	631.4	616.9	586.7	544.4	509.3	485.1	481.4	482.7	482.7
40°	569.7	556.4	529.8	494.7	463.3	445.2	443.9	446.3	447.6
42.5°	511.7	500.8	476.6	446.3	419.7	405.2	406.4	411.3	414.9
45°	459.6	450.0	428.2	401.6	378.6	367.7	371.4	377.4	381.0
47.5°	412.5	404.0	383.4	359.2	339.9	332.6	337.4	344.8	349.6
50°	368.9	361.6	342.3	316.9	301.2	296.4	302.3	309.7	312.1
52.5°	330.2	323.0	302.3	280.7	268.5	266.1	272.2	278.3	281.8
55°	290.3	284.2	267.4	248.0	238.3	237.1	243.2	248.0	250.4
57.5°	257.6	251.7	235.8	219.0	210.5	209.2	215.3	219.0	220.1
60°	226.2	220.1	205.7	189.9	183.9	183.9	187.5	189.9	191.1
62.5°	197.2	191.1	177.8	164.5	159.7	159.7	159.7	160.9	164.5
65°	169.3	164.5	152.4	140.3	136.7	134.3	134.3	134.3	136.7
67.5°	143.9	139.1	129.4	118.5	114.9	111.3	110.1	112.5	112.5
70°	119.7	116.1	106.4	98.0	94.4	90.7	89.5	94.4	94.4
72.5°	98.0	94.4	88.3	79.8	76.2	75.0	77.4	79.8	81.1
75°	77.4	73.8	68.9	64.1	60.4	61.7	65.3	66.5	67.8
77.5°	58.0	56.9	52.0	48.4	48.4	49.6	52.0	54.5	55.6
80°	41.2	39.9	37.5	35.1	36.2	38.7	39.9	42.3	41.2
82.5°	25.3	25.3	24.2	24.2	25.3	27.9	29.0	30.3	31.4
85°	13.3	13.3	13.3	14.6	15.7	17.0	18.1	19.4	19.4
87.5°	3.7	4.8	4.8	6.1	7.2	7.2	8.5	8.5	8.5
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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