

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: P580092

Luminaire Tested: **HCC4W20D010MW-HM40525935-41WWWB**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P580092
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: HCC4W20D010MW-HM40525935-41WWWB
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, BLACK BAFFLE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT
CYLINDER
Ballast/Driver: ELECTRONIC DRIVER

Summary

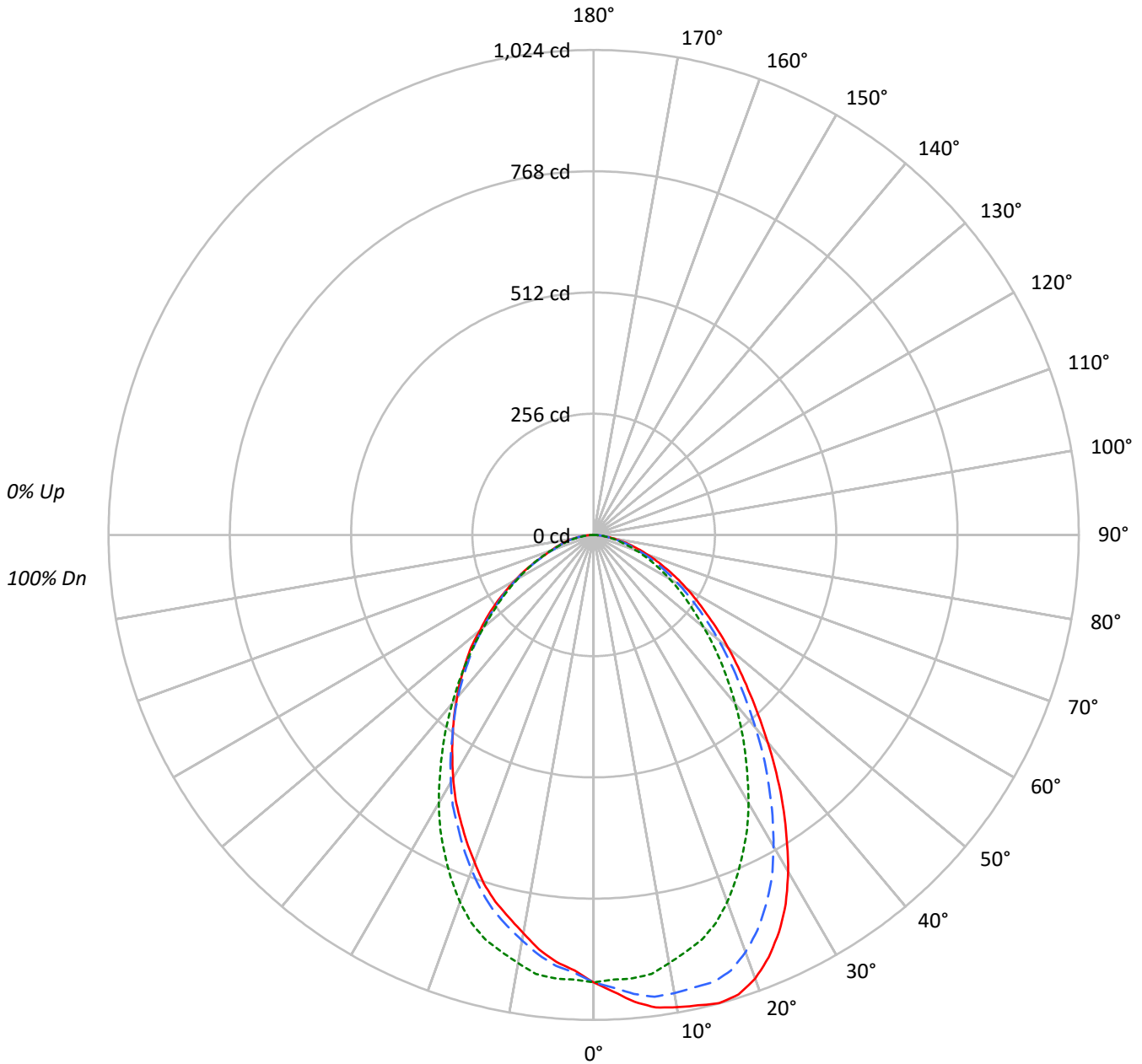
Lumens per Lamp: N/A
Luminaire Lumens: 1832.2 lumens
Efficiency: N/A
Efficacy: 91.6 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.07 / 1.15
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 20
Input Voltage (V): NR
Input Current (A_{in}): 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	50	30	10	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	110	106	103	99	108	104	101	98	100	97	95	96	94	92	92	91	89	87					87			
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	75					75			
3	94	85	77	72	92	83	76	71	80	75	70	78	73	69	75	71	68	66					66			
4	87	76	68	62	85	75	68	62	72	66	61	70	65	60	68	63	60	58					58			
5	81	69	61	55	79	68	60	55	66	59	54	64	58	53	62	57	53	51					51			
6	75	63	55	49	73	62	54	49	60	53	48	59	53	48	57	52	47	46					46			
7	70	58	50	44	68	57	49	44	55	48	43	54	48	43	53	47	43	41					41			
8	65	53	45	40	64	52	45	40	51	44	39	50	44	39	49	43	39	37					37			
9	61	49	41	36	60	48	41	36	47	41	36	46	40	36	45	40	36	34					34			
10	58	45	38	33	57	45	38	33	44	38	33	43	37	33	42	37	33	31					31			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	116537	116537	116537
5°	122529	116388	112029
10°	126839	114991	106937
15°	130710	112897	102362
20°	130855	108252	96477
25°	125944	101188	90450
30°	116933	93105	84459
35°	104817	83811	78150
40°	91972	74792	72248
45°	80398	66234	66652
50°	70981	57951	60043
55°	62600	51375	53998
60°	55950	45465	47291
65°	49558	40014	40014
70°	43313	34116	34116
75°	37030	28928	32359
80°	29336	25856	29336
85°	18823	22219	27456



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	89.5	4.9
10°-20°	252.1	13.8
20°-30°	353.1	19.3
30°-40°	363.8	19.9
40°-50°	309.8	16.9
50°-60°	229.5	12.5
60°-70°	144.0	7.9
70°-80°	71.6	3.9
80°-90°	18.8	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°	694.7	37.9
0°-40°	1058.6	57.8
0°-60°	1597.8	87.2
0°-90°	1832.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1832.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	945	945	945	945	945	
5°	990	973	940	913	905	95
15°	1024	978	884	820	802	288
25°	925	861	744	679	665	423
35°	696	644	557	520	519	434
45°	461	429	380	372	382	358
55°	291	268	239	244	251	263
65°	170	153	137	135	137	169
75°	78	69	61	66	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°	944.8	944.8	944.8	944.8	944.8	944.8	944.8	944.8	944.8
2.5°	965.4	961.8	956.9	948.5	940.0	932.6	925.4	921.7	920.5
5°	989.6	982.4	972.7	956.9	940.0	925.4	913.2	907.2	904.8
7.5°	1006.6	999.4	983.6	959.4	935.0	913.2	893.9	885.4	883.0
10°	1012.7	1004.2	982.4	949.6	918.1	891.4	869.5	858.6	853.8
12.5°	1017.5	1006.6	978.7	940.0	901.1	868.4	845.3	830.8	827.1
15°	1023.6	1011.4	977.5	930.2	884.1	845.3	819.9	806.5	801.6
17.5°	1017.5	1004.2	964.2	910.8	858.6	816.2	788.3	776.2	771.4
20°	996.9	982.4	937.4	880.4	824.7	781.0	753.1	741.0	735.0
22.5°	965.4	949.6	903.5	842.9	785.9	743.5	716.8	704.6	701.0
25°	925.4	909.6	861.1	799.2	743.5	702.2	679.1	668.2	664.6
27.5°	878.0	862.3	814.9	754.4	701.0	662.2	644.0	633.0	630.6
30°	821.0	805.3	759.2	703.5	653.7	617.3	602.7	594.3	593.0
32.5°	757.9	744.6	702.2	651.3	604.0	573.6	562.7	556.6	555.5
35°	696.1	681.5	644.0	597.9	556.6	530.0	520.3	519.0	519.0
37.5°	633.0	618.6	588.2	545.7	510.5	486.3	482.7	483.9	483.9
40°	571.2	557.9	531.2	496.1	464.5	446.3	445.2	447.6	448.7
42.5°	513.1	502.0	477.8	447.6	420.8	406.3	407.5	412.3	416.0
45°	460.9	451.1	429.3	402.6	379.7	368.6	372.3	378.4	382.1
47.5°	413.6	405.1	384.5	360.2	340.8	333.5	338.4	345.6	350.5
50°	369.9	362.7	343.2	317.7	302.0	297.2	303.2	310.5	312.9
52.5°	331.1	323.8	303.2	281.4	269.2	266.8	272.9	279.0	282.6
55°	291.1	285.0	268.1	248.7	238.9	237.7	243.7	248.7	251.1
57.5°	258.3	252.2	236.5	219.5	211.0	209.8	215.9	219.5	220.7
60°	226.8	220.7	206.2	190.4	184.3	184.3	188.0	190.4	191.7
62.5°	197.6	191.7	178.2	164.9	160.1	160.1	160.1	161.3	164.9
65°	169.8	164.9	152.8	140.7	137.1	134.7	134.7	134.7	137.1
67.5°	144.3	139.5	129.7	118.8	115.2	111.6	110.3	112.8	112.8
70°	120.1	116.4	106.7	98.2	94.6	91.0	89.7	94.6	94.6
72.5°	98.2	94.6	88.5	80.1	76.4	75.2	77.7	80.1	81.2
75°	77.7	74.0	69.2	64.2	60.7	61.8	65.5	66.8	67.9
77.5°	58.3	57.0	52.2	48.5	48.5	49.8	52.2	54.6	55.7
80°	41.3	40.0	37.6	35.2	36.4	38.8	40.0	42.4	41.3
82.5°	25.5	25.5	24.2	24.2	25.5	27.9	29.1	30.3	31.5
85°	13.3	13.3	13.3	14.6	15.7	17.0	18.2	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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— 0°-180° - - 45°-225° - - - - 90°-270°

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