

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: P580069

Luminaire Tested: **HCC4W20D010BZ-HM40525930-41RWWH**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P580069
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-15)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 9/9/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HCC4W20D010BZ-HM40525930-41RWWH
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT
CYLINDER
Ballast/Driver: ELECTRONIC DRIVER

Summary

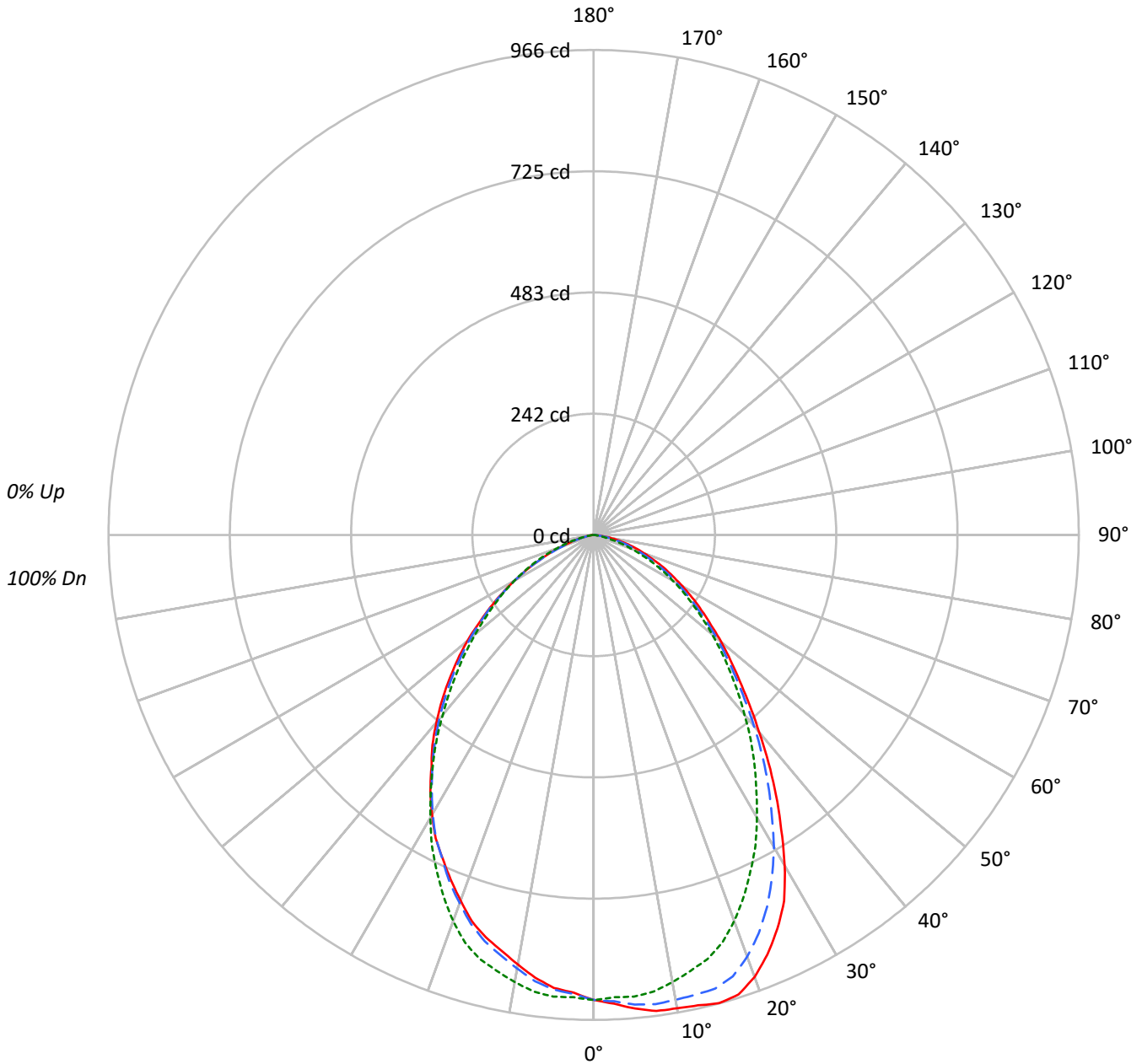
Lumens per Lamp: N/A
Luminaire Lumens: 1765.8 lumens
Efficiency: N/A
Efficacy: 88.3 lumens/watt
Spacing Criteria (0/90/45): 1.14 / 1.08 / 1.16
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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	111	107	104	100	108	105	102	99	101	98	96	97	95	93	93	92	90	88					88			
2	103	96	90	85	100	94	89	84	90	86	82	87	84	80	84	81	79	77					77			
3	95	86	79	73	92	84	78	73	81	76	71	79	74	70	76	72	69	67					67			
4	88	77	70	64	86	76	69	63	74	67	62	71	66	62	69	65	61	59					59			
5	81	70	62	56	79	69	61	56	67	60	55	65	59	55	63	58	54	52					52			
6	76	64	56	50	74	63	55	50	61	54	49	60	54	49	58	53	49	47					47			
7	71	58	51	45	69	58	50	45	56	49	45	55	49	44	54	48	44	42					42			
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38					38			
9	62	50	42	37	61	49	42	37	48	41	37	47	41	37	46	41	37	35					35			
10	58	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32					32			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	114267	114267	114267
5°	117279	114283	112153
10°	119925	113300	108841
15°	123317	111696	105976
20°	122979	107411	101675
25°	117792	100562	96806
30°	108344	92606	91638
35°	95315	84037	84745
40°	82456	75243	78383
45°	71676	66844	70874
50°	63612	58968	62940
55°	56428	51719	53934
60°	50251	44848	44848
65°	44684	37300	34936
70°	38588	28202	24884
75°	32359	18634	15346
80°	24506	8950	8169
85°	13020	3255	3255



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	87.7	5.0
10°-20°	248.7	14.1
20°-30°	350.8	19.9
30°-40°	362.4	20.5
40°-50°	307.2	17.4
50°-60°	223.5	12.7
60°-70°	130.6	7.4
70°-80°	48.5	2.7
80°-90°	6.3	0.4
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°	687.3	38.9
0°-40°	1049.7	59.4
0°-60°	1580.4	89.5
0°-90°	1765.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1765.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	926	926	926	926	926	
5°	947	939	923	909	906	91
15°	966	936	875	838	830	271
25°	866	817	739	712	711	396
35°	633	605	558	559	563	395
45°	411	399	383	397	406	320
55°	262	250	240	249	251	236
65°	153	140	128	120	120	152
75°	68	56	39	31	32	73
85°	9	6	2	2	2	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°	926.4	926.4	926.4	926.4	926.4	926.4	926.4	926.4	926.4
2.5°	934.6	932.3	929.9	926.4	921.8	918.4	915.0	912.7	912.7
5°	947.2	943.8	939.2	931.1	923.0	916.1	909.2	905.8	905.8
7.5°	956.4	951.8	942.6	931.1	917.3	906.9	896.5	891.9	889.6
10°	957.5	952.9	940.3	923.0	904.6	888.5	877.0	870.1	869.0
12.5°	959.8	954.1	938.0	913.8	889.6	870.1	857.4	850.5	848.2
15°	965.7	957.5	935.7	904.6	874.7	851.6	837.9	832.1	829.9
17.5°	959.8	948.3	921.8	885.0	851.6	826.3	812.5	806.8	806.8
20°	936.9	925.3	894.2	853.9	818.3	794.1	780.3	776.9	774.6
22.5°	904.6	891.9	858.5	816.0	780.3	758.4	749.2	744.6	743.5
25°	865.5	852.8	817.1	773.4	738.9	720.4	712.4	712.4	711.3
27.5°	821.7	805.7	768.8	730.9	697.5	683.6	680.2	680.2	681.3
30°	760.7	749.2	718.1	681.3	650.2	641.1	641.1	643.4	643.4
32.5°	695.2	687.1	659.4	627.3	603.1	597.4	599.7	604.2	605.4
35°	633.0	623.7	605.4	576.6	558.1	555.8	559.4	562.8	562.8
37.5°	572.0	562.8	550.1	527.2	513.3	514.4	519.0	523.6	527.2
40°	512.1	505.3	496.1	477.6	467.3	471.9	477.6	482.2	486.8
42.5°	459.3	452.3	445.4	431.6	424.7	430.5	437.4	441.9	446.5
45°	410.9	406.3	399.4	387.8	383.2	388.9	397.1	401.7	406.3
47.5°	369.4	367.2	358.0	347.5	345.2	351.0	358.0	363.7	367.2
50°	331.5	328.0	319.9	309.6	307.3	316.5	321.0	324.6	328.0
52.5°	294.7	291.2	281.9	272.8	272.8	279.6	283.1	284.2	287.8
55°	262.4	259.0	249.7	242.8	240.5	246.3	248.6	248.6	250.8
57.5°	232.5	229.1	219.8	211.7	210.6	214.0	214.0	214.0	215.2
60°	203.7	200.3	191.1	184.1	181.8	182.9	181.8	180.7	181.8
62.5°	177.2	173.8	164.6	156.6	154.3	154.3	150.7	149.6	150.7
65°	153.1	147.3	140.4	132.4	127.8	124.3	119.7	119.7	119.7
67.5°	128.9	124.3	116.2	108.2	102.4	96.7	89.8	92.1	93.3
70°	107.0	103.6	94.4	86.4	78.2	71.3	65.6	67.9	69.0
72.5°	87.5	82.8	74.8	65.6	58.7	49.4	46.0	48.3	48.3
75°	67.9	63.3	56.4	47.1	39.1	31.1	31.1	32.2	32.2
77.5°	50.6	46.0	39.1	31.1	24.2	18.5	19.6	19.6	19.6
80°	34.5	31.1	25.3	18.5	12.6	10.3	10.3	10.3	11.5
82.5°	19.6	17.3	13.8	9.2	5.7	5.7	5.7	5.7	5.7
85°	9.2	6.9	5.7	3.4	2.3	2.3	2.3	2.3	2.3
87.5°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
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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