

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: P580005

Luminaire Tested: **HCC4S20D010MB-HM40525830-41WWBB**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P580005  
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: HCC4S20D010MB-HM40525830-41WWBB  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE BAFFLE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT  
CYLINDER  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

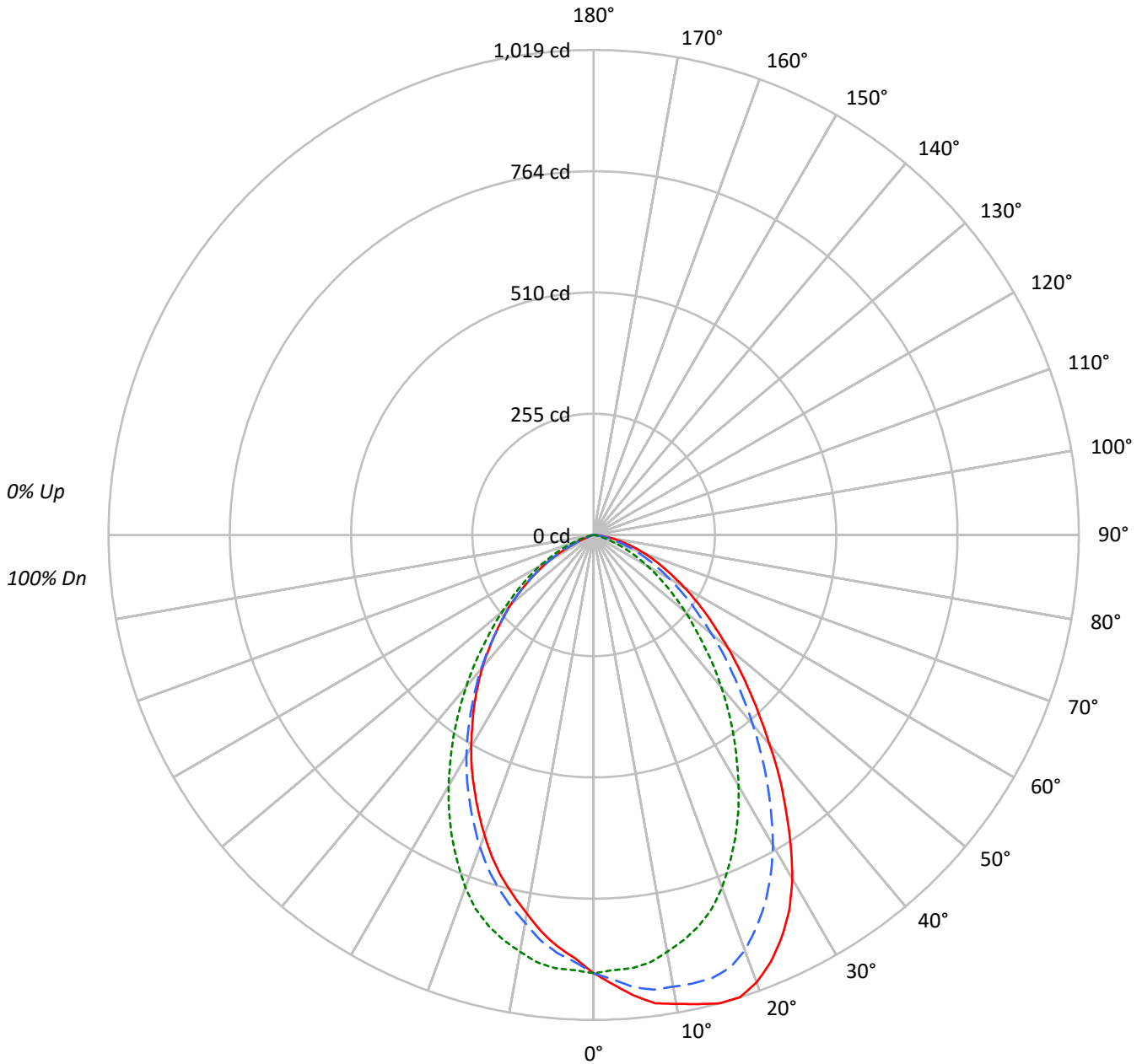
Lumens per Lamp: N/A  
Luminaire Lumens: 1590.2 lumens  
Efficiency: N/A  
Efficacy: 79.5 lumens/watt  
Spacing Criteria (0/90/45): 1.11 / 1.04 / 1.12  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

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	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	108	104	101	109	105	102	100	101	99	97	97	95	94	94	92	91	89					89			
2	103	97	91	87	101	95	90	86	92	87	84	88	85	82	85	83	80	78					78			
3	96	87	80	75	94	86	79	74	83	78	73	80	76	72	78	74	71	69					69			
4	89	79	72	66	87	78	71	65	75	69	65	73	68	64	71	67	63	61					61			
5	83	72	64	58	81	71	64	58	69	62	58	67	61	57	65	60	56	55					55			
6	77	66	58	52	75	65	57	52	63	57	52	61	56	51	60	55	51	49					49			
7	72	60	53	47	71	59	52	47	58	51	47	57	51	46	55	50	46	44					44			
8	68	56	48	43	66	55	48	43	54	47	42	53	47	42	51	46	42	40					40			
9	64	52	44	39	62	51	44	39	50	43	39	49	43	39	48	43	39	37					37			
10	60	48	41	36	59	47	41	36	46	40	36	46	40	36	45	39	36	34					34			

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

	0°	90°	180°
0°	113564	113564	113564
5°	120313	113169	107510
10°	125311	111383	101213
15°	130110	108696	95160
20°	131327	103474	88011
25°	127087	95703	80569
30°	118813	86724	73307
35°	105886	77096	65862
40°	92568	67063	58626
45°	80625	56884	50726
50°	70367	48242	43463
55°	61675	39977	35203
60°	53951	32317	25829
65°	46990	24079	14535
70°	41077	15580	4724
75°	33741	8102	1239
80°	25074	3765	923
85°	14718	1840	1840



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	86.9	5.5
10°-20°	243.2	15.3
20°-30°	336.2	21.1
30°-40°	338.1	21.3
40°-50°	272.8	17.2
50°-60°	184.5	11.6
60°-70°	93.9	5.9
70°-80°	30.1	1.9
80°-90°	4.6	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°	666.3	41.9
0°-40°	1004.4	63.2
0°-60°	1461.7	91.9
0°-90°	1590.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1590.2	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	921	921	921	921	921	
5°	972	953	914	881	868	94
15°	1019	964	851	770	745	287
25°	934	853	703	617	592	427
35°	703	635	512	448	437	439
45°	462	414	326	291	291	358
55°	287	248	186	162	164	258
65°	161	131	82	54	50	161
75°	71	50	17	4	3	76
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°	920.7	920.7	920.7	920.7	920.7	920.7	920.7	920.7	920.7
2.5°	945.5	940.3	935.0	925.9	915.4	905.0	898.3	893.2	890.5
5°	971.7	965.2	953.4	933.8	914.0	895.8	881.4	872.2	868.3
7.5°	992.6	983.6	963.8	936.4	906.2	877.5	859.1	846.0	840.8
10°	1000.5	990.1	963.8	927.2	889.3	853.8	827.7	814.6	808.1
12.5°	1009.7	997.9	965.2	919.3	872.2	830.3	800.1	783.2	776.6
15°	1018.9	1003.2	963.8	907.5	851.2	802.8	770.1	753.0	745.2
17.5°	1018.9	1000.5	953.4	887.9	823.8	772.6	736.0	716.3	709.8
20°	1000.5	979.5	928.5	856.5	788.3	733.4	698.1	678.3	670.5
22.5°	971.7	948.1	893.2	818.5	746.5	692.8	657.5	639.1	631.2
25°	933.8	910.1	852.6	775.3	703.2	649.5	616.9	599.8	592.0
27.5°	889.3	863.0	805.4	728.1	657.5	606.3	576.3	560.5	554.0
30°	834.2	809.3	753.0	677.1	608.9	561.8	534.3	519.9	514.7
32.5°	770.1	749.1	694.0	623.4	559.2	516.0	491.1	479.3	474.1
35°	703.2	683.6	635.2	569.7	512.0	471.4	447.9	440.0	437.4
37.5°	640.4	623.4	576.3	516.0	463.6	428.3	407.3	402.0	399.4
40°	574.9	563.2	519.9	464.9	416.5	385.0	368.0	364.1	364.1
42.5°	516.0	502.8	464.9	415.1	372.0	340.5	328.7	324.8	326.1
45°	462.2	449.2	413.8	368.0	326.1	299.9	290.8	290.8	290.8
47.5°	412.6	400.8	368.0	320.8	286.8	265.9	256.7	256.7	258.0
50°	366.7	358.8	322.2	281.6	251.4	231.8	225.3	223.9	226.5
52.5°	323.5	314.3	281.6	244.9	216.1	200.4	193.8	192.5	193.8
55°	286.8	276.3	247.5	212.2	185.9	170.2	162.4	161.0	163.7
57.5°	251.4	243.6	213.5	182.0	157.1	141.4	134.9	132.2	133.6
60°	218.7	210.8	183.3	153.2	131.0	115.3	106.1	103.5	104.7
62.5°	188.6	182.0	155.9	127.1	104.7	90.4	81.2	74.7	77.3
65°	161.0	154.5	131.0	102.2	82.5	66.8	53.7	48.4	49.8
67.5°	137.5	129.6	107.4	81.2	61.6	44.5	30.2	27.5	27.5
70°	113.9	106.1	86.5	62.9	43.2	23.6	13.1	13.1	13.1
72.5°	91.6	85.1	66.8	47.1	27.5	10.4	5.3	5.3	5.3
75°	70.8	65.5	49.8	32.7	17.0	5.3	3.9	2.6	2.6
77.5°	52.4	47.1	35.3	22.3	10.4	2.6	2.6	2.6	2.6
80°	35.3	31.4	23.6	13.1	5.3	1.3	1.3	1.3	1.3
82.5°	21.0	18.4	13.1	6.5	2.6	1.3	1.3	1.3	1.3
85°	10.4	7.9	5.3	2.6	1.3	1.3	1.3	1.3	1.3
87.5°	2.6	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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