

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: P579988

Luminaire Tested: **HCC4S20D010MB-HM40525827-41WWW**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P579988  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-16)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/9/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HCC4S20D010MB-HM40525827-41WWW  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT  
CYLINDER  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

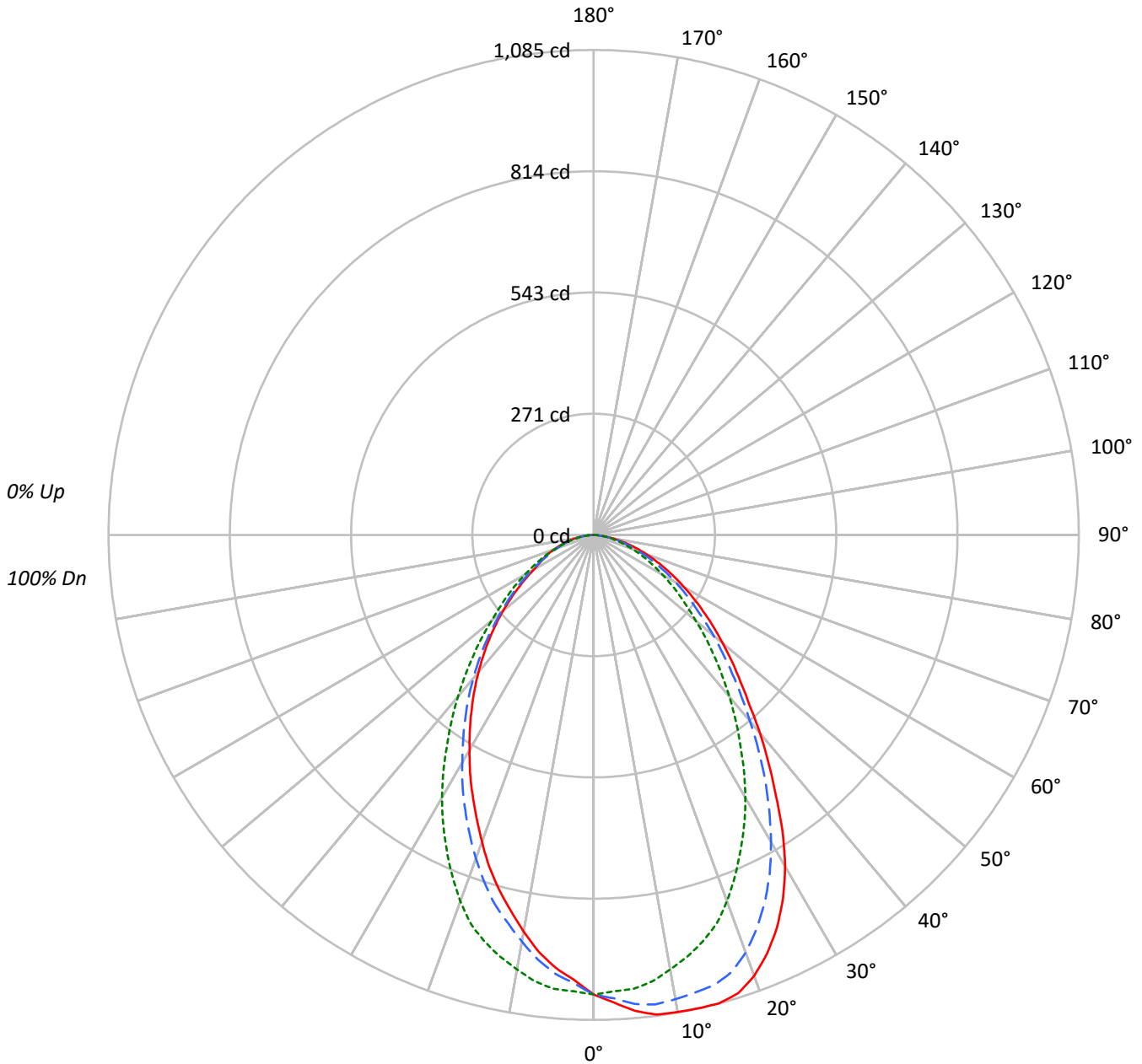
Lumens per Lamp: N/A  
Luminaire Lumens: 1835.8 lumens  
Efficiency: N/A  
Efficacy: 91.8 lumens/watt  
Spacing Criteria (0/90/45): 1.06 / 1.03 / 1.1  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

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	0					
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100								
1	111	106	103	100	108	104	101	98	100	97	95	96	94	92	93	91	89	87								
2	102	95	89	84	100	93	88	83	90	85	81	87	83	80	84	81	78	76								
3	94	85	78	72	92	84	77	72	81	75	71	78	73	69	76	72	68	66								
4	87	77	69	63	85	76	68	63	73	67	62	71	66	61	69	64	60	58								
5	81	70	62	56	79	69	61	56	67	60	55	65	59	54	63	58	54	52								
6	76	64	56	50	74	63	55	50	61	54	49	59	53	49	58	53	48	47								
7	71	58	50	45	69	58	50	45	56	49	44	55	49	44	53	48	44	42								
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38								
9	62	50	42	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35								
10	59	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32								

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

	0°	90°	180°
0°	126812	126812	126812
5°	132373	126244	120399
10°	135732	123608	112861
15°	138525	120303	104711
20°	137799	114473	95887
25°	132014	105843	87252
30°	121975	96637	79061
35°	106910	85965	71569
40°	93084	75935	64455
45°	81009	66251	57599
50°	72170	57088	50813
55°	64492	50192	43956
60°	57578	43862	37892
65°	51192	38467	36016
70°	44936	33143	33575
75°	38030	28261	31120
80°	29265	24009	28342
85°	16983	18823	24059



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	96.4	5.2
10°-20°	265.8	14.5
20°-30°	363.2	19.8
30°-40°	364.7	19.9
40°-50°	301.7	16.4
50°-60°	218.6	11.9
60°-70°	138.5	7.5
70°-80°	70.0	3.8
80°-90°	17.1	0.9
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°	725.3	39.5
0°-40°	1090.0	59.4
0°-60°	1610.2	87.7
0°-90°	1835.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1835.8	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1028	1028	1028	1028	1028	
5°	1069	1053	1020	986	972	102
15°	1085	1042	942	855	820	305
25°	970	906	778	680	641	443
35°	710	668	571	501	475	445
45°	464	438	380	342	330	361
55°	300	273	233	213	204	270
65°	175	156	132	118	123	175
75°	80	69	59	62	65	85
85°	12	12	13	16	17	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°	1028.1	1028.1	1028.1	1028.1	1028.1	1028.1	1028.1	1028.1	1028.1
2.5°	1047.4	1043.8	1037.7	1030.5	1022.0	1012.3	1003.9	999.0	996.6
5°	1069.1	1064.3	1053.4	1037.7	1019.6	1001.4	985.7	976.0	972.4
7.5°	1082.4	1075.2	1059.5	1035.3	1007.5	980.9	957.9	944.6	941.0
10°	1083.7	1075.2	1054.7	1022.0	986.9	951.9	924.0	904.6	901.1
12.5°	1084.8	1074.1	1048.6	1009.9	966.3	922.8	888.9	866.0	859.9
15°	1084.8	1074.1	1042.5	996.6	942.1	892.6	855.1	828.5	820.0
17.5°	1075.2	1063.2	1025.6	972.4	913.1	857.5	813.9	786.2	777.7
20°	1049.8	1036.5	994.2	936.1	872.1	813.9	770.4	741.4	730.5
22.5°	1013.5	997.8	953.0	890.2	826.1	766.8	724.4	694.3	684.5
25°	970.0	954.3	905.9	844.2	777.7	722.0	679.7	651.8	641.1
27.5°	916.8	899.8	852.7	791.0	729.3	673.6	635.0	609.5	598.7
30°	856.4	838.1	793.4	734.2	678.5	625.3	587.8	567.2	555.1
32.5°	786.2	770.4	730.5	677.3	625.3	574.5	543.0	524.9	515.2
35°	710.0	701.5	667.7	621.7	570.9	528.5	500.7	483.8	475.3
37.5°	642.2	633.7	604.7	566.0	521.3	482.5	459.6	445.0	437.8
40°	578.1	570.9	543.0	510.4	471.6	437.8	418.4	407.6	400.3
42.5°	515.2	511.6	488.6	458.3	424.5	395.5	379.8	371.3	365.2
45°	464.4	459.6	437.8	408.8	379.8	355.6	342.3	336.2	330.2
47.5°	419.7	413.6	390.7	365.2	338.6	316.9	304.8	298.7	296.3
50°	376.1	370.1	349.5	324.1	297.5	281.8	272.2	266.1	264.8
52.5°	337.4	331.4	308.4	284.2	263.7	250.4	241.9	235.8	233.4
55°	299.9	292.7	273.3	250.4	233.4	221.4	212.9	206.8	204.4
57.5°	266.1	258.9	241.9	220.1	204.4	193.5	186.3	180.2	177.8
60°	233.4	227.3	211.6	191.1	177.8	168.2	160.8	156.0	153.6
62.5°	203.1	198.3	182.6	164.5	153.6	145.1	139.1	134.2	136.7
65°	175.4	170.6	156.0	140.3	131.8	123.4	118.5	118.5	123.4
67.5°	148.8	143.9	131.8	118.5	111.3	105.2	101.6	105.2	108.9
70°	124.6	119.7	108.9	98.0	91.9	87.1	87.1	90.7	93.1
72.5°	101.6	96.8	88.3	79.8	75.0	71.3	75.0	77.4	79.8
75°	79.8	76.2	68.9	62.9	59.3	58.0	61.7	64.1	65.3
77.5°	59.3	56.9	52.0	47.1	44.7	46.0	49.6	50.8	52.0
80°	41.2	39.9	36.2	33.8	33.8	35.1	37.5	38.7	39.9
82.5°	25.3	25.3	22.9	21.8	22.9	25.3	26.6	27.9	27.9
85°	12.0	13.3	12.0	12.0	13.3	15.7	15.7	17.0	17.0
87.5°	3.7	3.7	4.8	4.8	6.1	6.1	6.1	6.1	7.2
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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