

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: P580033

Luminaire Tested: **HCC4S20D010MW-HM40525840-41WDW**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P580033  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-9)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/9/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HCC4S20D010MW-HM40525840-41WDW  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WIDE DISTRIBUTION, WHITE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT CYLINDER  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

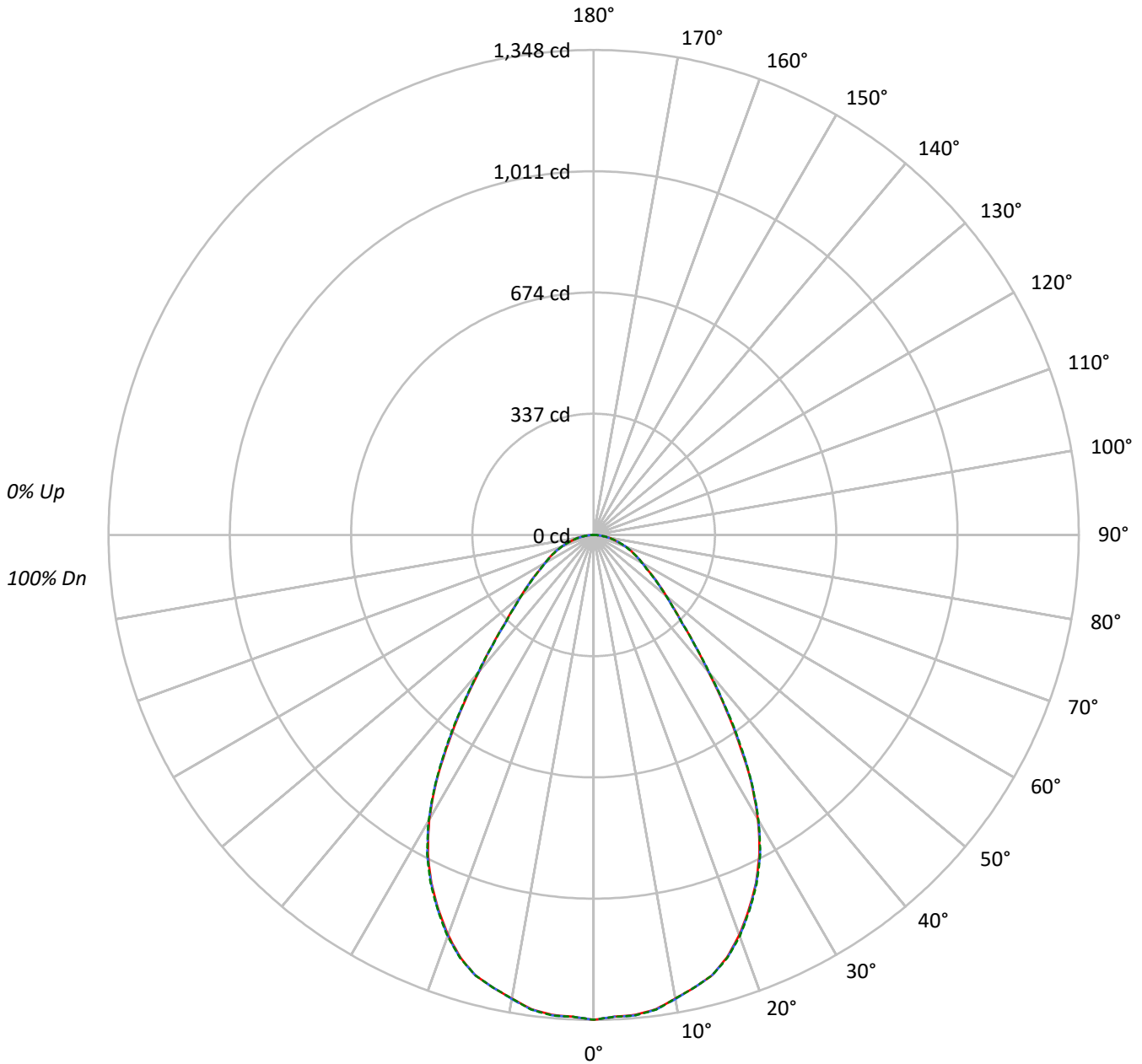
Lumens per Lamp: N/A  
Luminaire Lumens: 2078.9 lumens  
Efficiency: N/A  
Efficacy: 103.9 lumens/watt  
Spacing Criteria (0/90/45): 1.06 / 1.07 / 1.04  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

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			100
1	111	107	104	101	108	105	102	99	101	98	96	97	95	93	94	92	90	89			89
2	103	97	91	87	101	95	90	86	91	87	84	88	85	82	85	83	80	78			78
3	96	87	81	76	94	86	80	75	83	78	74	81	76	72	78	74	71	69			69
4	90	80	72	67	87	78	72	66	76	70	66	74	69	65	72	68	64	62			62
5	84	73	65	60	82	72	65	59	70	64	59	68	63	58	66	62	58	56			56
6	78	67	59	54	77	66	59	54	64	58	53	63	57	53	61	56	53	51			51
7	73	62	54	49	72	61	54	49	60	53	49	58	53	48	57	52	48	46			46
8	69	57	50	45	68	57	50	45	55	49	45	54	49	44	53	48	44	42			42
9	65	53	46	41	64	53	46	41	52	45	41	51	45	41	50	45	41	39			39
10	61	50	43	38	60	49	43	38	48	42	38	48	42	38	47	42	38	36			36

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

	0°	45°	90°
0°	166208	166208	166208
5°	165803	165976	165976
10°	163875	164050	163875
15°	161907	161907	161907
20°	155269	155637	155808
25°	145229	145406	145801
30°	130122	130535	130535
35°	105645	106488	106699
40°	79735	80170	80412
45°	61070	60826	60826
50°	50314	50045	50045
55°	43181	42902	42902
60°	38533	38188	38188
65°	36220	36220	36220
70°	33720	33720	33720
75°	30548	31263	30548
80°	28768	27773	28768
85°	23634	23634	23634



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	127.0	6.1
10°-20°	355.3	17.1
20°-30°	488.2	23.5
30°-40°	439.0	21.1
40°-50°	277.3	13.3
50°-60°	181.0	8.7
60°-70°	122.7	5.9
70°-80°	69.1	3.3
80°-90°	19.4	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°	970.4	46.7
0°-40°	1409.4	67.8
0°-60°	1867.8	89.8
0°-90°	2078.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2078.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1348	1348	1348	1348	1348	
5°	1339	1339	1340	1340	1340	127
15°	1268	1268	1268	1268	1268	355
25°	1067	1068	1068	1071	1071	487
35°	702	704	707	710	709	437
45°	350	349	349	349	349	278
55°	201	201	200	201	200	182
65°	124	124	124	124	124	123
75°	64	66	66	66	64	69
85°	17	17	17	17	17	20
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1347.5	1347.5	1347.5	1347.5	1347.5
2.5°	1340.5	1340.5	1340.5	1340.5	1340.5
5°	1339.1	1339.1	1340.5	1340.5	1340.5
7.5°	1329.3	1330.7	1330.7	1330.7	1330.7
10°	1308.4	1308.4	1309.8	1309.8	1308.4
12.5°	1288.9	1288.9	1288.9	1290.3	1288.9
15°	1267.9	1267.9	1267.9	1267.9	1267.9
17.5°	1231.6	1233.0	1233.0	1233.0	1233.0
20°	1182.9	1185.7	1185.7	1187.0	1187.0
22.5°	1127.0	1128.4	1129.8	1131.3	1129.8
25°	1067.1	1068.4	1068.4	1071.3	1071.3
27.5°	997.3	998.7	1001.6	1001.6	1001.6
30°	913.6	915.1	916.5	916.5	916.5
32.5°	814.6	814.6	817.4	818.8	817.4
35°	701.6	704.4	707.2	710.0	708.6
37.5°	594.3	597.0	598.4	598.4	599.8
40°	495.2	497.9	497.9	500.8	499.4
42.5°	417.0	415.7	415.7	418.4	417.0
45°	350.1	348.7	348.7	348.7	348.7
47.5°	301.3	299.9	299.9	299.9	299.9
50°	262.2	260.8	260.8	260.8	260.8
52.5°	230.2	228.7	228.7	228.7	227.3
55°	200.8	200.8	199.5	200.8	199.5
57.5°	174.3	174.3	174.3	174.3	174.3
60°	156.2	154.8	154.8	154.8	154.8
62.5°	139.5	139.5	139.5	139.5	139.5
65°	124.1	124.1	124.1	124.1	124.1
67.5°	108.9	107.4	108.9	108.9	107.4
70°	93.5	92.1	93.5	93.5	93.5
72.5°	78.1	78.1	78.1	79.5	78.1
75°	64.1	65.6	65.6	65.6	64.1
77.5°	51.6	53.0	51.6	51.6	51.6
80°	40.5	39.1	39.1	39.1	40.5
82.5°	27.9	27.9	27.9	27.9	27.9
85°	16.7	16.7	16.7	16.7	16.7
87.5°	7.0	7.0	7.0	7.0	7.0
90°	0.0	0.0	0.0	0.0	0.0

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— 0°-180°    - - 45°-225°    - - - - 90°-270°

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