

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: P580051

Luminaire Tested: **HCC4S20D010MW-HM40525927-41WDW**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P580051  
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-HM40525927-41WDW  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WIDE DISTRIBUTION, WHITE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT CYLINDER  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

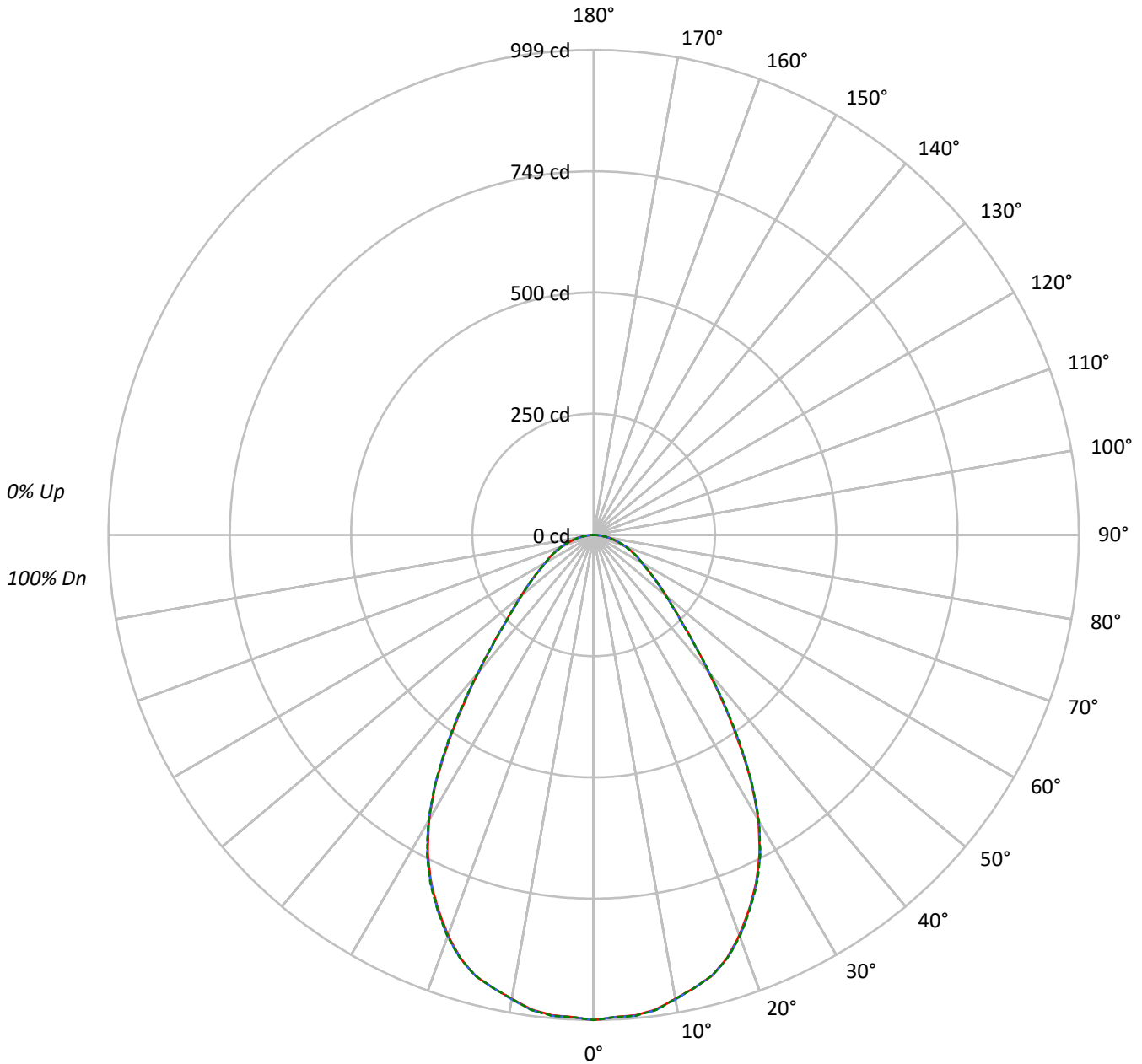
Lumens per Lamp: N/A  
Luminaire Lumens: 1541.7 lumens  
Efficiency: N/A  
Efficacy: 77.1 lumens/watt  
Spacing Criteria (0/90/45): 1.06 / 1.07 / 1.04  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

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	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°	123259	123259	123259
5°	122950	123086	123086
10°	121516	121654	121516
15°	120073	120073	120073
20°	115130	115405	115550
25°	107693	107830	108115
30°	96494	96794	96794
35°	78345	78963	79113
40°	59125	59463	59640
45°	45301	45109	45109
50°	37304	37112	37112
55°	32042	31827	31827
60°	28567	28320	28320
65°	26880	26880	26880
70°	24992	24992	24992
75°	22685	23161	22685
80°	21381	20599	21381
85°	17549	17549	17549



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	94.1	6.1
10°-20°	263.5	17.1
20°-30°	362.0	23.5
30°-40°	325.5	21.1
40°-50°	205.7	13.3
50°-60°	134.3	8.7
60°-70°	91.0	5.9
70°-80°	51.2	3.3
80°-90°	14.4	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°	719.6	46.7
0°-40°	1045.2	67.8
0°-60°	1385.1	89.8
0°-90°	1541.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1541.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	999	999	999	999	999	
5°	993	993	994	994	994	94
15°	940	940	940	940	940	263
25°	791	792	792	794	794	361
35°	520	522	524	526	525	324
45°	260	259	259	259	259	206
55°	149	149	148	149	148	135
65°	92	92	92	92	92	91
75°	48	49	49	49	48	51
85°	12	12	12	12	12	14
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	999.3	999.3	999.3	999.3	999.3
2.5°	994.1	994.1	994.1	994.1	994.1
5°	993.0	993.0	994.1	994.1	994.1
7.5°	985.7	986.8	986.8	986.8	986.8
10°	970.2	970.2	971.3	971.3	970.2
12.5°	955.8	955.8	955.8	956.8	955.8
15°	940.3	940.3	940.3	940.3	940.3
17.5°	913.4	914.4	914.4	914.4	914.4
20°	877.1	879.2	879.2	880.3	880.3
22.5°	835.8	836.9	837.9	838.9	837.9
25°	791.3	792.3	792.3	794.4	794.4
27.5°	739.6	740.6	742.7	742.7	742.7
30°	677.5	678.6	679.6	679.6	679.6
32.5°	604.1	604.1	606.2	607.2	606.2
35°	520.3	522.3	524.4	526.5	525.4
37.5°	440.7	442.7	443.8	443.8	444.8
40°	367.2	369.3	369.3	371.4	370.4
42.5°	309.2	308.2	308.2	310.3	309.2
45°	259.7	258.6	258.6	258.6	258.6
47.5°	223.4	222.4	222.4	222.4	222.4
50°	194.4	193.4	193.4	193.4	193.4
52.5°	170.7	169.6	169.6	169.6	168.6
55°	149.0	149.0	148.0	149.0	148.0
57.5°	129.3	129.3	129.3	129.3	129.3
60°	115.8	114.8	114.8	114.8	114.8
62.5°	103.5	103.5	103.5	103.5	103.5
65°	92.1	92.1	92.1	92.1	92.1
67.5°	80.6	79.6	80.6	80.6	79.6
70°	69.3	68.2	69.3	69.3	69.3
72.5°	57.9	57.9	57.9	59.0	57.9
75°	47.6	48.6	48.6	48.6	47.6
77.5°	38.3	39.3	38.3	38.3	38.3
80°	30.1	29.0	29.0	29.0	30.1
82.5°	20.6	20.6	20.6	20.6	20.6
85°	12.4	12.4	12.4	12.4	12.4
87.5°	5.2	5.2	5.2	5.2	5.2
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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