

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: P580087

Luminaire Tested: **HCC4S20D010BZ-HM40525935-41WDW**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P580087  
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: HCC4S20D010BZ-HM40525935-41WDW  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WIDE DISTRIBUTION, WHITE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT CYLINDER  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

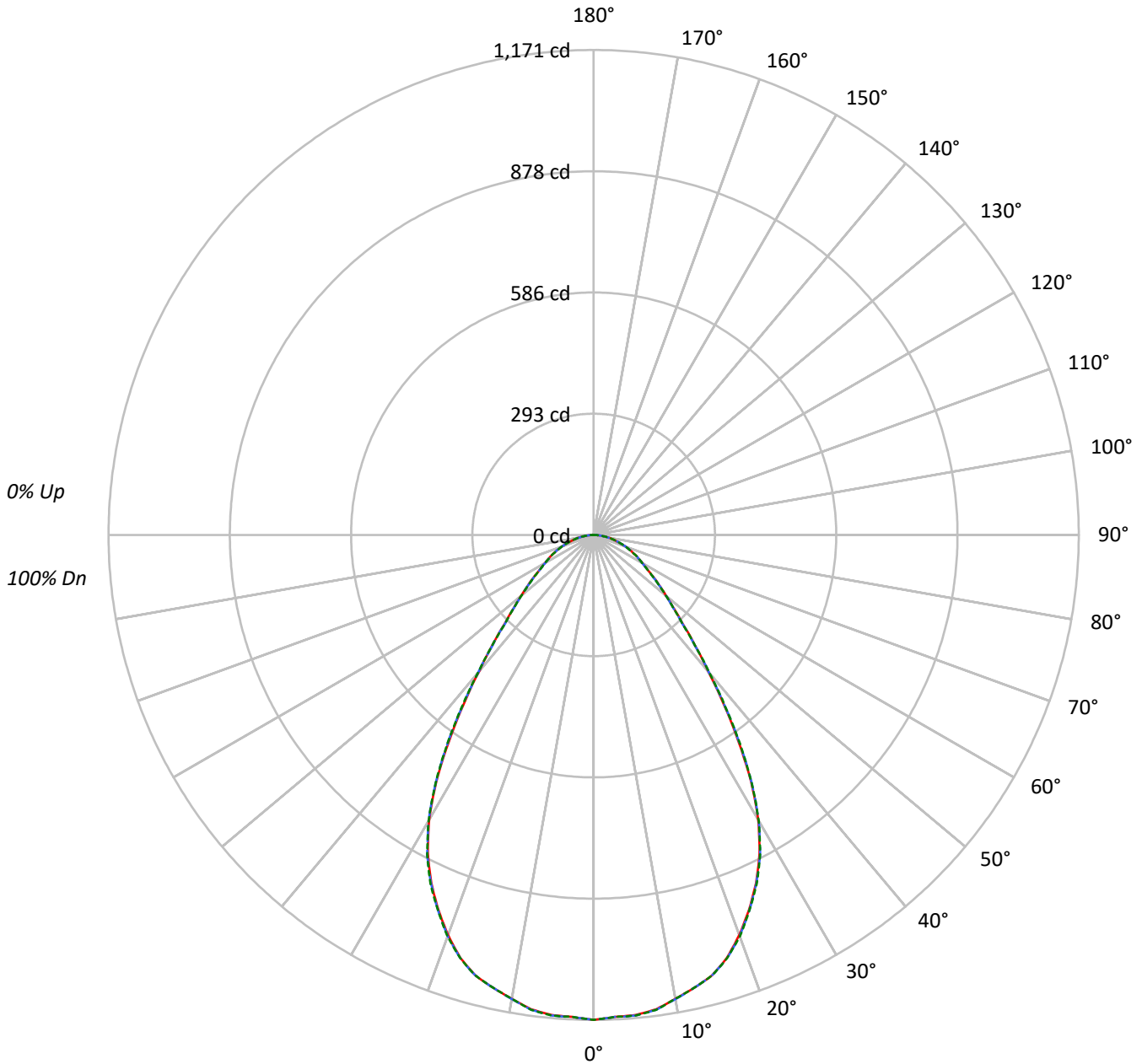
Lumens per Lamp: N/A  
Luminaire Lumens: 1806.7 lumens  
Efficiency: N/A  
Efficacy: 90.3 lumens/watt  
Spacing Criteria (0/90/45): 1.06 / 1.07 / 1.04  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

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

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

	0°	45°	90°
0°	144438	144438	144438
5°	144086	144247	144247
10°	142420	142570	142420
15°	140709	140709	140709
20°	134924	135252	135410
25°	126203	126380	126706
30°	113101	113443	113443
35°	91807	92545	92725
40°	69301	69688	69881
45°	53081	52854	52854
50°	43732	43483	43483
55°	37547	37268	37268
60°	33501	33180	33180
65°	31492	31492	31492
70°	29284	29284	29284
75°	26545	27165	26545
80°	24932	24151	24932
85°	20662	20662	20662



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	110.3	6.1
10°-20°	308.8	17.1
20°-30°	424.3	23.5
30°-40°	381.5	21.1
40°-50°	241.0	13.3
50°-60°	157.4	8.7
60°-70°	106.6	5.9
70°-80°	60.0	3.3
80°-90°	16.9	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°	843.4	46.7
0°-40°	1224.8	67.8
0°-60°	1623.2	89.8
0°-90°	1806.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1806.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1171	1171	1171	1171	1171	
5°	1164	1164	1165	1165	1165	110
15°	1102	1102	1102	1102	1102	309
25°	927	929	929	931	931	423
35°	610	612	615	617	616	380
45°	304	303	303	303	303	241
55°	175	175	173	175	173	158
65°	108	108	108	108	108	107
75°	56	57	57	57	56	60
85°	15	15	15	15	15	17
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1171.0	1171.0	1171.0	1171.0	1171.0
2.5°	1165.0	1165.0	1165.0	1165.0	1165.0
5°	1163.7	1163.7	1165.0	1165.0	1165.0
7.5°	1155.3	1156.5	1156.5	1156.5	1156.5
10°	1137.1	1137.1	1138.3	1138.3	1137.1
12.5°	1120.2	1120.2	1120.2	1121.3	1120.2
15°	1101.9	1101.9	1101.9	1101.9	1101.9
17.5°	1070.4	1071.6	1071.6	1071.6	1071.6
20°	1027.9	1030.4	1030.4	1031.6	1031.6
22.5°	979.5	980.7	981.9	983.1	981.9
25°	927.3	928.6	928.6	931.0	931.0
27.5°	866.8	867.9	870.3	870.3	870.3
30°	794.1	795.2	796.5	796.5	796.5
32.5°	707.9	707.9	710.3	711.6	710.3
35°	609.7	612.2	614.6	617.1	615.8
37.5°	516.4	518.8	520.0	520.0	521.3
40°	430.4	432.8	432.8	435.2	434.0
42.5°	362.5	361.2	361.2	363.7	362.5
45°	304.3	303.0	303.0	303.0	303.0
47.5°	261.9	260.6	260.6	260.6	260.6
50°	227.9	226.6	226.6	226.6	226.6
52.5°	200.0	198.8	198.8	198.8	197.6
55°	174.6	174.6	173.3	174.6	173.3
57.5°	151.5	151.5	151.5	151.5	151.5
60°	135.8	134.5	134.5	134.5	134.5
62.5°	121.2	121.2	121.2	121.2	121.2
65°	107.9	107.9	107.9	107.9	107.9
67.5°	94.5	93.4	94.5	94.5	93.4
70°	81.2	80.1	81.2	81.2	81.2
72.5°	67.9	67.9	67.9	69.0	67.9
75°	55.7	57.0	57.0	57.0	55.7
77.5°	44.8	46.1	44.8	44.8	44.8
80°	35.1	34.0	34.0	34.0	35.1
82.5°	24.2	24.2	24.2	24.2	24.2
85°	14.6	14.6	14.6	14.6	14.6
87.5°	6.1	6.1	6.1	6.1	6.1
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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