

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: P580106

Luminaire Tested: **HCC4S20D010BZ-HM40525940-41RWWC**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P580106  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-14)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/9/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HCC4S20D010BZ-HM40525940-41RWWC  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, SPECULAR TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT  
CYLINDER  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

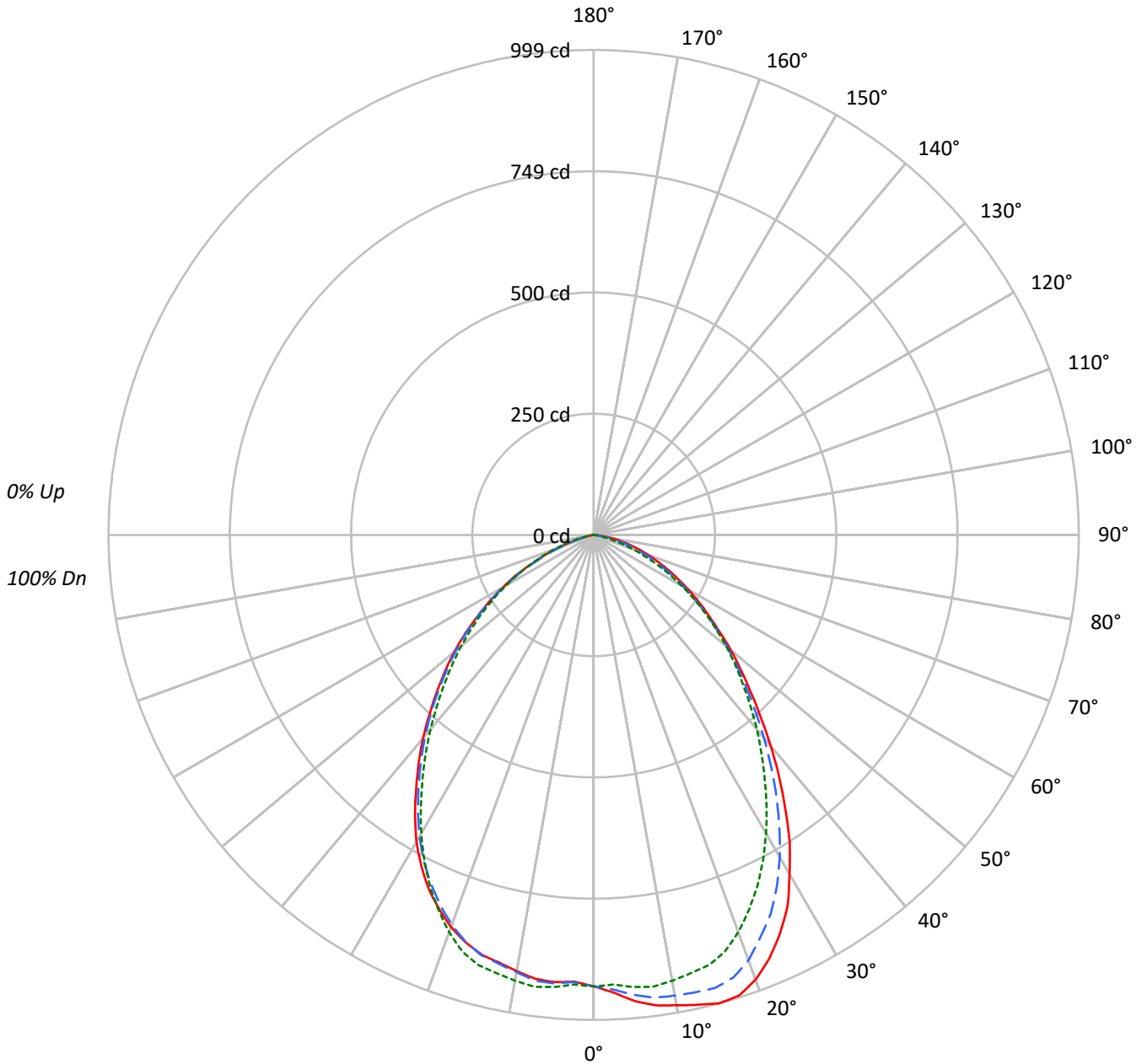
Lumens per Lamp: N/A  
Luminaire Lumens: 1937.5 lumens  
Efficiency: N/A  
Efficacy: 96.9 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.15 / 1.21  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

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	103	100	108	105	102	99	101	98	96	97	95	93	93	92	90	88					88			
2	102	95	90	85	100	94	88	84	90	86	82	87	83	80	84	81	78	76					76			
3	95	85	78	73	92	84	77	72	81	75	71	78	74	70	76	72	69	67					67			
4	87	77	69	63	85	76	68	63	73	67	62	71	66	61	69	64	60	58					58			
5	81	70	61	56	79	68	61	55	66	60	55	65	59	54	63	58	54	52					52			
6	75	63	55	49	74	62	55	49	61	54	49	59	53	48	58	52	48	46					46			
7	70	58	50	44	69	57	49	44	56	49	44	54	48	44	53	47	43	41					41			
8	66	53	45	40	64	53	45	40	51	44	40	50	44	39	49	43	39	37					37			
9	62	49	42	36	60	49	41	36	47	41	36	46	40	36	45	40	36	34					34			
10	58	46	38	33	57	45	38	33	44	38	33	43	37	33	42	37	33	31					31			

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

	0°	90°	180°
0°	114687	114687	114687
5°	119322	115744	114493
10°	123219	116769	114252
15°	127544	117111	114225
20°	127980	114290	112806
25°	123467	108592	109449
30°	114882	101109	103972
35°	103492	92515	95918
40°	91232	84163	87995
45°	79770	75828	79543
50°	70655	68237	71844
55°	62127	60256	62686
60°	55481	51435	52989
65°	48770	41824	41065
70°	42591	30835	28094
75°	35314	18586	14964
80°	26779	7174	4475
85°	12454	1840	1840



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	89.7	4.6
10°-20°	261.7	13.5
20°-30°	379.0	19.6
30°-40°	399.9	20.6
40°-50°	346.1	17.9
50°-60°	256.4	13.2
60°-70°	147.8	7.6
70°-80°	51.6	2.7
80°-90°	5.4	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°	730.4	37.7
0°-40°	1130.2	58.3
0°-60°	1732.7	89.4
0°-90°	1937.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1937.5	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	930	930	930	930	930	
5°	964	951	935	927	925	93
15°	999	966	917	896	894	281
25°	907	862	798	793	804	415
35°	687	656	614	628	637	429
45°	457	445	435	451	456	355
55°	289	283	280	290	292	261
65°	167	157	143	136	141	167
75°	74	63	39	31	31	80
85°	9	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°	929.8	929.8	929.8	929.8	929.8	929.8	929.8	929.8	929.8
2.5°	943.5	941.1	937.3	932.3	927.2	923.4	922.2	920.9	920.9
5°	963.7	958.7	951.1	941.1	934.8	931.0	927.2	924.7	924.7
7.5°	977.5	972.4	961.2	947.3	938.6	931.0	926.0	922.2	922.2
10°	983.8	977.5	963.7	946.0	932.3	922.2	914.7	912.2	912.2
12.5°	991.4	983.8	965.0	942.3	924.7	912.2	904.6	902.1	902.1
15°	998.8	990.1	966.2	939.9	917.1	902.1	895.8	894.5	894.5
17.5°	995.1	983.8	956.1	924.7	899.6	884.6	878.3	878.3	879.5
20°	975.0	963.7	932.3	897.1	870.7	859.4	854.4	856.9	859.4
22.5°	944.8	931.0	897.1	863.1	835.5	825.5	825.5	829.3	833.0
25°	907.2	894.5	861.9	824.2	797.9	790.3	792.8	799.1	804.2
27.5°	864.4	850.6	816.7	781.5	755.1	751.3	757.6	766.4	768.9
30°	806.6	795.3	766.4	732.5	709.9	708.6	717.4	723.6	730.0
32.5°	751.3	738.8	711.1	678.5	662.2	663.4	673.4	681.0	684.8
35°	687.3	675.9	655.9	629.5	614.4	616.9	628.2	635.8	637.0
37.5°	627.0	619.4	599.3	579.2	567.9	572.9	583.0	591.7	591.7
40°	566.6	560.3	545.3	529.0	522.7	529.0	539.0	546.5	546.5
42.5°	508.8	505.1	492.5	481.2	477.5	486.2	495.0	501.4	500.1
45°	457.3	453.5	444.8	436.0	434.7	443.5	451.0	454.8	456.0
47.5°	410.9	408.3	400.8	394.6	394.6	403.3	409.6	413.4	414.6
50°	368.2	365.7	359.4	354.3	355.6	364.4	369.3	373.1	374.4
52.5°	325.4	324.1	319.1	312.9	316.6	322.9	329.2	331.7	333.0
55°	288.9	288.9	282.7	277.7	280.2	286.5	290.2	291.5	291.5
57.5°	256.4	255.1	247.5	242.5	243.7	250.0	252.6	253.8	253.8
60°	224.9	223.7	216.1	208.5	208.5	212.3	213.6	214.8	214.8
62.5°	194.8	193.5	184.7	178.4	175.9	174.7	174.7	177.2	182.1
65°	167.1	165.9	157.0	147.0	143.3	139.5	135.7	138.2	140.7
67.5°	142.0	139.5	130.6	121.9	113.1	106.8	100.5	104.3	109.3
70°	118.1	115.6	105.5	95.5	85.5	75.4	70.3	75.4	77.9
72.5°	95.5	93.0	82.9	72.8	60.3	50.2	49.0	50.2	51.5
75°	74.1	72.8	62.9	51.5	39.0	31.4	31.4	31.4	31.4
77.5°	55.3	52.8	42.7	32.7	22.6	17.5	16.3	16.3	16.3
80°	37.7	35.2	26.4	18.8	10.1	7.6	7.6	6.3	6.3
82.5°	21.3	20.1	13.8	7.6	3.8	2.5	2.5	2.5	2.5
85°	8.8	7.6	5.0	2.5	1.3	1.3	1.3	1.3	1.3
87.5°	1.3	1.3	1.3	0.0	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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