

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: P571729

Luminaire Tested: **HCC4S20D010BZ-HM40525835-41RWWC**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P571729  
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-HM40525835-41RWWC  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, SPECULAR TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT  
CYLINDER  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

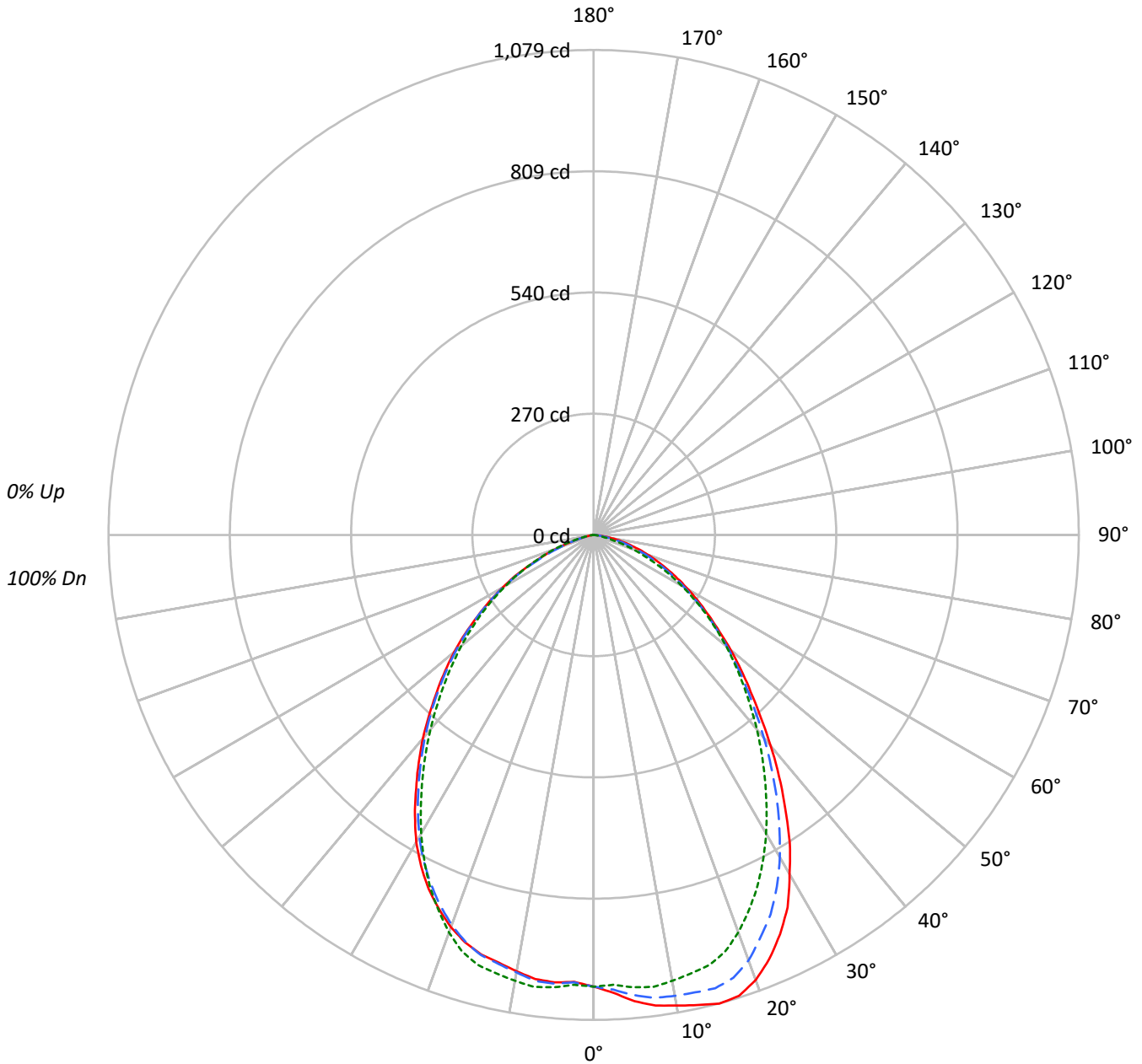
Lumens per Lamp: N/A  
Luminaire Lumens: 2093.7 lumens  
Efficiency: N/A  
Efficacy: 104.7 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.15 / 1.21  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

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	0					
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100								
1	111	107	103	100	108	105	102	99	101	98	96	97	95	93	93	92	90	88								
2	102	95	90	85	100	94	88	84	90	86	82	87	83	80	84	81	78	76								
3	95	85	78	73	92	84	77	72	81	75	71	78	74	70	76	72	69	67								
4	87	77	69	63	85	76	68	63	73	67	62	71	66	61	69	64	60	58								
5	81	70	61	56	79	68	61	55	66	60	55	65	59	54	63	58	54	52								
6	75	63	55	49	74	62	55	49	61	54	49	59	53	48	58	52	48	46								
7	70	58	50	44	69	57	49	44	56	49	44	54	48	44	53	47	43	41								
8	66	53	45	40	64	53	45	40	51	44	40	50	44	39	49	43	39	37								
9	62	49	42	36	60	49	41	36	47	41	36	46	40	36	45	40	36	34								
10	58	46	38	33	57	45	38	33	44	38	33	43	37	33	42	37	33	31								

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

	0°	90°	180°
0°	123938	123938	123938
5°	128943	125080	123730
10°	133164	126175	123457
15°	137836	126560	123444
20°	138297	123504	121903
25°	133416	117343	118268
30°	124154	109256	112347
35°	111834	99968	103642
40°	98606	90942	95096
45°	86207	81951	85980
50°	76335	73725	77659
55°	67159	65116	67740
60°	59946	55604	57282
65°	52681	45151	44392
70°	46054	33287	30366
75°	38173	20064	16203
80°	28910	7742	4830
85°	13445	1981	1981



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	96.9	4.6
10°-20°	282.8	13.5
20°-30°	409.6	19.6
30°-40°	432.1	20.6
40°-50°	374.0	17.9
50°-60°	277.0	13.2
60°-70°	159.7	7.6
70°-80°	55.8	2.7
80°-90°	5.9	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°	789.3	37.7
0°-40°	1221.4	58.3
0°-60°	1872.4	89.4
0°-90°	2093.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2093.7	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1005	1005	1005	1005	1005	
5°	1041	1028	1010	1002	999	100
15°	1079	1044	991	968	967	304
25°	980	931	862	857	869	449
35°	743	709	664	679	688	464
45°	494	481	470	488	493	384
55°	312	305	303	314	315	282
65°	180	170	155	147	152	180
75°	80	68	42	34	34	86
85°	10	5	1	1	1	15
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°	1004.8	1004.8	1004.8	1004.8	1004.8	1004.8	1004.8	1004.8	1004.8
2.5°	1019.7	1016.9	1012.9	1007.4	1002.0	997.9	996.6	995.3	995.3
5°	1041.4	1036.0	1027.8	1016.9	1010.2	1006.0	1002.0	999.3	999.3
7.5°	1056.3	1050.9	1038.7	1023.7	1014.2	1006.0	1000.6	996.6	996.6
10°	1063.2	1056.3	1041.4	1022.3	1007.4	996.6	988.5	985.7	985.7
12.5°	1071.3	1063.2	1042.7	1018.3	999.3	985.7	977.6	974.8	974.8
15°	1079.4	1069.9	1044.1	1015.6	991.1	974.8	968.1	966.7	966.7
17.5°	1075.3	1063.2	1033.2	999.3	972.1	955.8	949.0	949.0	950.4
20°	1053.6	1041.4	1007.4	969.4	940.9	928.7	923.2	926.0	928.7
22.5°	1021.1	1006.0	969.4	932.7	902.9	892.0	892.0	896.2	900.2
25°	980.3	966.7	931.4	890.6	862.2	854.1	856.7	863.5	869.0
27.5°	934.1	919.2	882.5	844.5	816.0	812.0	818.7	828.2	830.9
30°	871.7	859.4	828.2	791.5	767.1	765.7	775.3	782.0	788.8
32.5°	812.0	798.3	768.5	733.2	715.5	716.9	727.8	735.9	739.9
35°	742.7	730.4	708.7	680.2	663.9	666.6	678.9	687.1	688.3
37.5°	677.5	669.4	647.6	625.9	613.6	619.2	629.9	639.5	639.5
40°	612.4	605.5	589.2	571.6	564.8	571.6	582.4	590.6	590.6
42.5°	549.9	545.9	532.2	520.0	515.9	525.4	535.0	541.7	540.4
45°	494.2	490.1	480.6	471.2	469.8	479.3	487.5	491.5	492.9
47.5°	444.0	441.3	433.1	426.3	426.3	435.9	442.6	446.6	448.0
50°	397.8	395.1	388.3	382.9	384.2	393.8	399.2	403.3	404.7
52.5°	351.7	350.3	344.9	338.0	342.2	348.9	355.7	358.4	359.8
55°	312.3	312.3	305.4	300.1	302.8	309.6	313.6	315.0	315.0
57.5°	277.0	275.6	267.5	262.1	263.4	270.2	272.9	274.2	274.2
60°	243.0	241.7	233.5	225.4	225.4	229.4	230.8	232.2	232.2
62.5°	210.5	209.1	199.6	192.8	190.1	188.7	188.7	191.4	196.8
65°	180.5	179.3	169.8	158.9	154.7	150.7	146.6	149.3	152.1
67.5°	153.5	150.7	141.2	131.7	122.2	115.4	108.6	112.6	118.1
70°	127.7	124.9	114.0	103.2	92.3	81.4	76.0	81.4	84.2
72.5°	103.2	100.5	89.6	78.8	65.1	54.3	53.0	54.3	55.6
75°	80.1	78.8	67.9	55.6	42.1	34.0	34.0	34.0	34.0
77.5°	59.8	57.0	46.1	35.3	24.4	19.0	17.7	17.7	17.7
80°	40.7	38.0	28.6	20.4	10.9	8.1	8.1	6.8	6.8
82.5°	23.1	21.7	14.9	8.1	4.1	2.8	2.8	2.8	2.8
85°	9.5	8.1	5.4	2.8	1.4	1.4	1.4	1.4	1.4
87.5°	1.4	1.4	1.4	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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