

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: P580398

Luminaire Tested: **HCC4S30D010BZ-HM43040940-41WWWB**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P580398  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-18)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/9/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HCC4S30D010BZ-HM43040940-41WWWB  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, BLACK BAFFLE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT  
CYLINDER  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

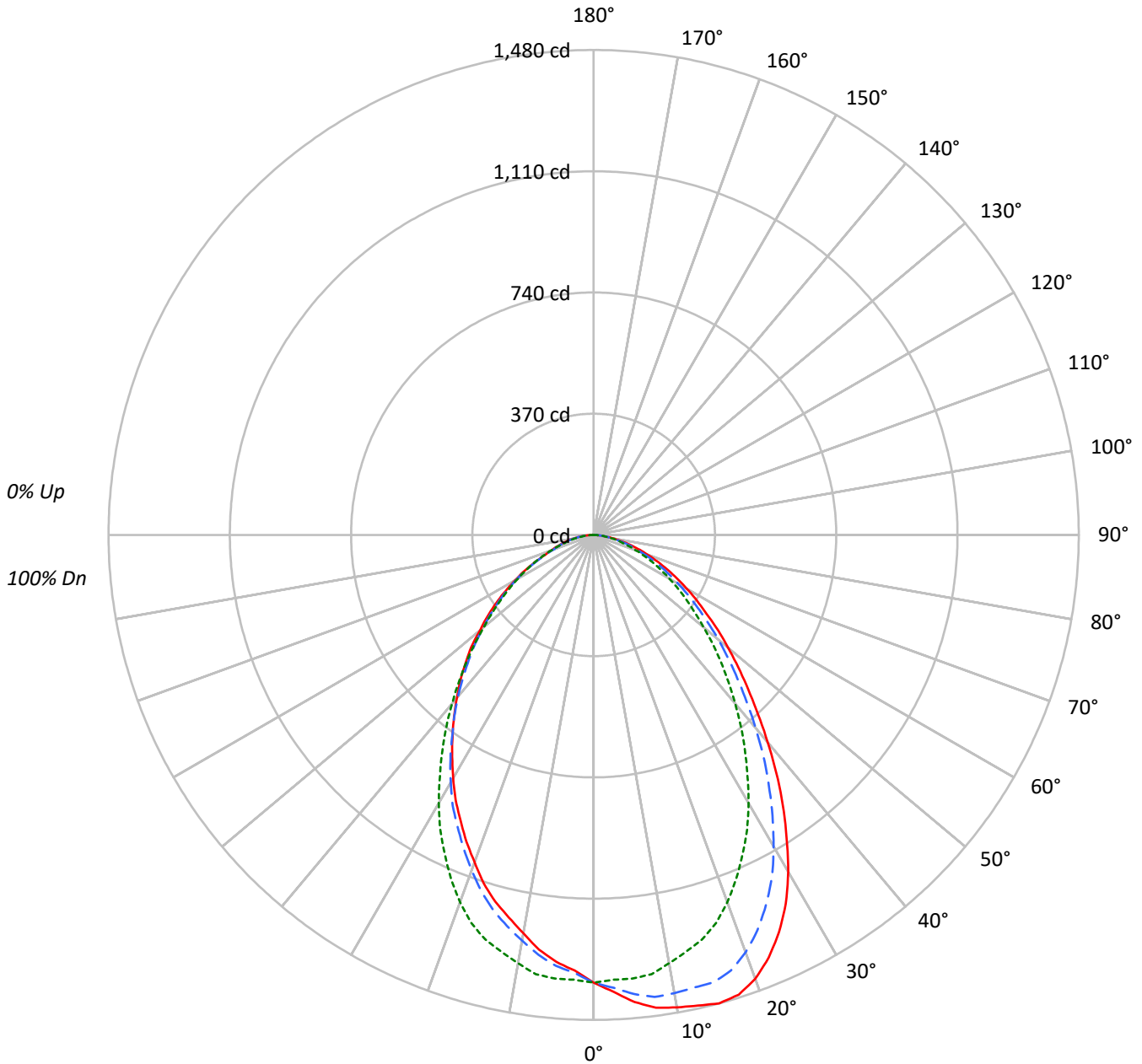
Lumens per Lamp: N/A  
Luminaire Lumens: 2649.0 lumens  
Efficiency: N/A  
Efficacy: 94.6 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.07 / 1.15  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

Input Watts (W): 28  
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	110	106	103	99	108	104	101	98	100	97	95	96	94	92	92	91	89	87			
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	75			
3	94	85	77	72	92	83	76	71	80	75	70	78	73	69	75	71	68	66			
4	87	76	68	62	85	75	68	62	72	66	61	70	65	60	68	63	60	58			
5	81	69	61	55	79	68	60	55	66	59	54	64	58	53	62	57	53	51			
6	75	63	55	49	73	62	54	49	60	53	48	59	53	48	57	52	47	46			
7	70	58	50	44	68	57	49	44	55	48	43	54	48	43	53	47	43	41			
8	65	53	45	40	64	52	45	40	51	44	39	50	44	39	49	43	39	37			
9	61	49	41	36	60	48	41	36	47	41	36	46	40	36	45	40	36	34			
10	58	45	38	33	57	45	38	33	44	38	33	43	37	33	42	37	33	31			

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

	0°	90°	180°
0°	168478	168478	168478
5°	177157	168255	161952
10°	183376	166242	154607
15°	188966	163222	148001
20°	189201	156503	139479
25°	182070	146290	130762
30°	169075	134594	122117
35°	151541	121185	113008
40°	132967	108139	104451
45°	116227	95731	96342
50°	102624	83780	86793
55°	90513	74277	78062
60°	80890	65743	68333
65°	71652	57847	57847
70°	62607	49299	49299
75°	53471	41748	46752
80°	42406	37363	42406
85°	27314	32267	39768



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	129.4	4.9
10°-20°	364.4	13.8
20°-30°	510.6	19.3
30°-40°	526.0	19.9
40°-50°	447.8	16.9
50°-60°	331.8	12.5
60°-70°	208.2	7.9
70°-80°	103.4	3.9
80°-90°	27.2	1.0
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°	1004.4	37.9
0°-40°	1530.4	57.8
0°-60°	2310.1	87.2
0°-90°	2649.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2649.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1366	1366	1366	1366	1366	
5°	1431	1406	1359	1320	1308	138
15°	1480	1413	1278	1185	1159	416
25°	1338	1245	1075	982	961	612
35°	1006	931	805	752	750	628
45°	666	621	549	538	552	517
55°	421	388	345	352	363	381
65°	246	221	198	195	198	245
75°	112	100	88	95	98	120
85°	19	19	23	26	28	25
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°	1365.9	1365.9	1365.9	1365.9	1365.9	1365.9	1365.9	1365.9	1365.9
2.5°	1395.7	1390.5	1383.5	1371.2	1358.9	1348.4	1337.8	1332.6	1330.8
5°	1430.8	1420.3	1406.3	1383.5	1358.9	1337.8	1320.3	1311.5	1308.0
7.5°	1455.3	1444.9	1422.1	1387.0	1351.9	1320.3	1292.2	1279.9	1276.4
10°	1464.1	1451.8	1420.3	1372.9	1327.3	1288.7	1257.2	1241.4	1234.4
12.5°	1471.1	1455.3	1415.0	1358.9	1302.7	1255.5	1222.1	1201.1	1195.8
15°	1479.8	1462.3	1413.3	1344.9	1278.2	1222.1	1185.3	1166.0	1159.0
17.5°	1471.1	1451.8	1394.0	1316.8	1241.4	1180.0	1139.7	1122.1	1115.1
20°	1441.4	1420.3	1355.4	1272.9	1192.3	1129.2	1088.9	1071.4	1062.6
22.5°	1395.7	1372.9	1306.3	1218.6	1136.2	1074.9	1036.3	1018.7	1013.5
25°	1337.8	1315.0	1245.0	1155.5	1074.9	1015.2	981.9	966.1	960.8
27.5°	1269.5	1246.7	1178.3	1090.7	1013.5	957.3	931.1	915.3	911.8
30°	1187.1	1164.2	1097.7	1017.0	945.0	892.5	871.5	859.2	857.4
32.5°	1095.9	1076.6	1015.2	941.5	873.2	829.4	813.6	804.8	803.0
35°	1006.4	985.4	931.1	864.4	804.8	766.3	752.3	750.5	750.5
37.5°	915.3	894.3	850.4	789.0	738.2	703.1	697.9	699.6	699.6
40°	825.8	806.5	767.9	717.2	671.6	645.2	643.5	647.0	648.7
42.5°	741.7	725.9	690.8	647.0	608.4	587.3	589.2	596.1	601.4
45°	666.3	652.3	620.7	582.2	548.8	533.1	538.3	547.1	552.3
47.5°	598.0	585.7	555.9	520.8	492.7	482.2	489.2	499.7	506.7
50°	534.8	524.3	496.2	459.4	436.6	429.5	438.3	448.8	452.3
52.5°	478.7	468.1	438.3	406.8	389.3	385.8	394.5	403.3	408.6
55°	420.9	412.1	387.5	359.5	345.4	343.7	352.4	359.5	363.0
57.5°	373.5	364.7	341.9	317.4	305.1	303.3	312.1	317.4	319.1
60°	327.9	319.1	298.1	275.2	266.5	266.5	271.7	275.2	277.0
62.5°	285.8	277.0	257.7	238.5	231.5	231.5	231.5	233.2	238.5
65°	245.5	238.5	221.0	203.4	198.2	194.6	194.6	194.6	198.2
67.5°	208.7	201.7	187.6	171.8	166.6	161.3	159.6	163.1	163.1
70°	173.6	168.3	154.3	142.0	136.7	131.5	129.7	136.7	136.7
72.5°	142.0	136.7	128.0	115.7	110.4	108.7	112.2	115.7	117.4
75°	112.2	106.9	99.9	92.9	87.6	89.5	94.6	96.4	98.1
77.5°	84.1	82.5	75.4	70.2	70.2	71.9	75.4	78.8	80.7
80°	59.7	57.9	54.4	50.9	52.6	56.1	57.9	61.4	59.7
82.5°	36.8	36.8	35.1	35.1	36.8	40.4	42.1	43.9	45.6
85°	19.3	19.3	19.3	21.1	22.8	24.6	26.3	28.1	28.1
87.5°	5.3	7.0	7.0	8.8	10.5	10.5	12.3	12.3	12.3
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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