

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: P584260

Luminaire Tested: **HC830D010-HM82555830-81RWWH**

Issue Date: 10/21/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P584260  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2109-368-15)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 10/21/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HC830D010-HM82555830-81RWWH  
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, HAZE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3002.8 lumens  
Efficiency: N/A  
Efficacy: 107.2 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.07 / 1.16  
Luminous Opening: Circular (Dia: 0.67' x H: 0')  
CIE Type: Direct

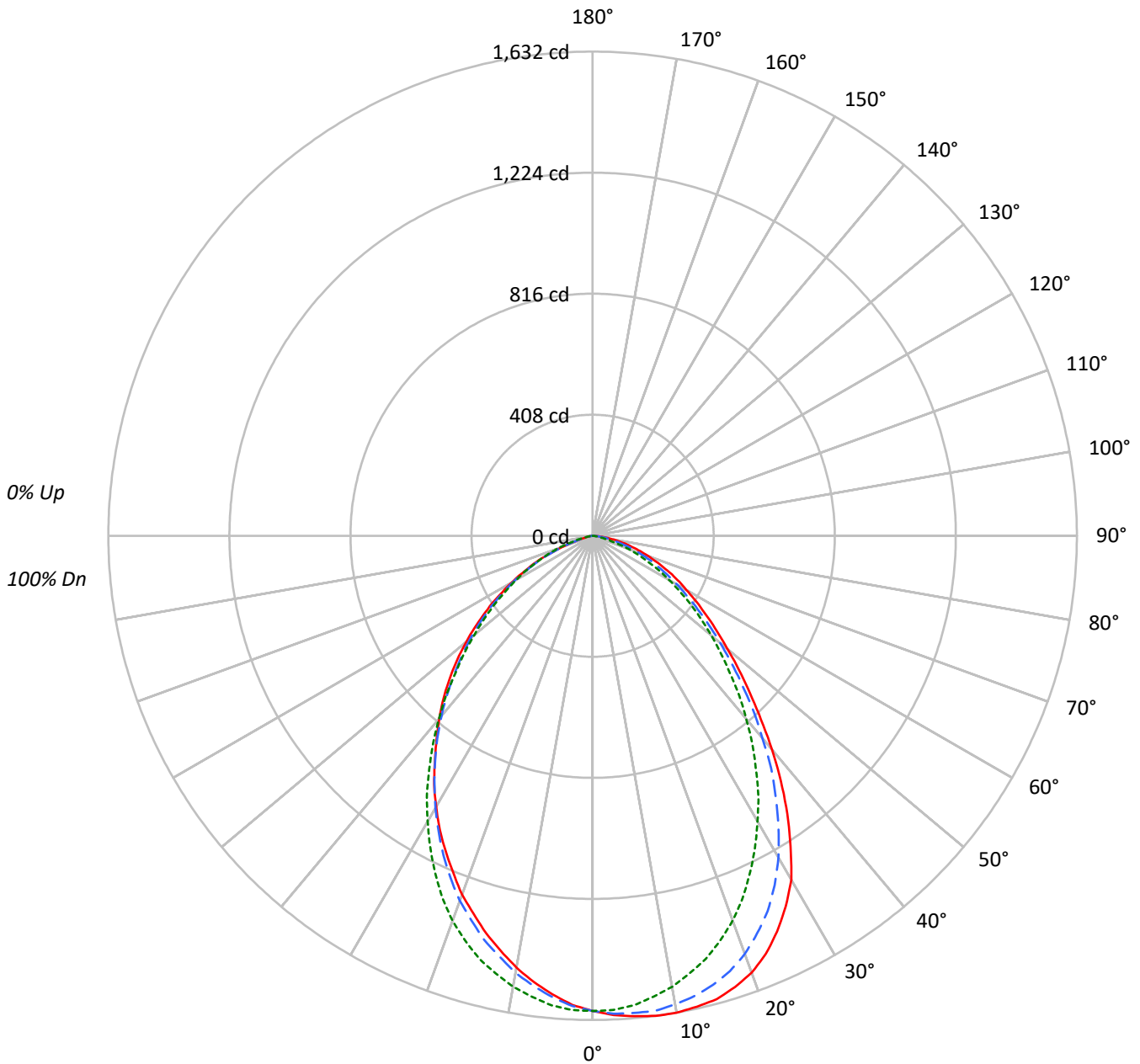
Input Watts (W): 28  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	100	100	100
1	111	107	104	100	108	105	102	99	101	98	96	97	95	93	93	92	90	88	88	88	88
2	103	96	90	85	100	94	89	84	90	86	82	87	84	80	84	81	79	77	77	77	77
3	95	86	79	73	92	84	78	73	81	76	71	79	74	70	76	72	69	67	67	67	67
4	88	77	70	64	86	76	69	63	74	67	63	71	66	62	69	65	61	59	59	59	59
5	81	70	62	56	79	69	62	56	67	60	55	65	59	55	63	58	54	52	52	52	52
6	76	64	56	50	74	63	55	50	61	54	49	60	54	49	58	53	49	47	47	47	47
7	71	58	51	45	69	58	50	45	56	49	45	55	49	44	54	48	44	42	42	42	42
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38	38	38	38
9	62	50	42	37	61	49	42	37	48	41	37	47	41	37	46	41	36	35	35	35	35
10	58	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32	32	32	32

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

	0°	90°	180°
0°	49391	49391	49391
5°	50319	49177	48038
10°	51104	48321	46279
15°	51618	47117	44272
20°	51422	45298	42237
25°	50066	42683	39876
30°	47685	39566	37558
35°	43057	36112	34885
40°	37831	32412	32328
45°	32655	28485	29720
50°	28424	24989	26654
55°	25203	21704	23225
60°	22492	18341	19279
65°	20277	14885	15199
70°	17996	11153	9007
75°	15512	6458	3884
80°	11951	2326	1154
85°	7713	743	743



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	150.4	5.0
10°-20°	418.6	13.9
20°-30°	592.0	19.7
30°-40°	623.8	20.8
40°-50°	530.2	17.7
50°-60°	381.8	12.7
60°-70°	220.2	7.3
70°-80°	75.4	2.5
80°-90°	10.4	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°	1161.0	38.7
0°-40°	1784.8	59.4
0°-60°	2696.8	89.8
0°-90°	3002.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3002.8	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1602	1602	1602	1602	1602	
5°	1626	1615	1589	1561	1552	155
15°	1617	1567	1476	1411	1387	455
25°	1472	1396	1254	1189	1172	675
35°	1144	1076	959	925	927	712
45°	749	714	653	658	682	582
55°	469	432	404	419	432	422
65°	278	239	204	200	208	276
75°	130	98	54	35	33	137
85°	22	13	2	2	2	29
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	1601.7	1601.7	1601.7	1601.7	1601.7	1601.7	1601.7	1601.7	1601.7	1601.7	1601.7
2.5°	1616.9	1619.2	1616.9	1616.9	1614.8	1612.6	1610.5	1608.2	1604.0	1599.6	1599.6
5°	1625.6	1630.0	1625.6	1625.6	1619.2	1614.8	1610.5	1604.0	1595.3	1588.7	1588.7
7.5°	1632.1	1632.1	1632.1	1625.6	1621.3	1614.8	1604.0	1593.0	1582.2	1571.4	1567.0
10°	1632.1	1632.1	1630.0	1621.3	1616.9	1604.0	1593.0	1577.9	1562.7	1547.5	1543.2
12.5°	1625.6	1627.9	1623.5	1614.8	1604.0	1588.7	1573.5	1554.0	1536.7	1519.3	1510.6
15°	1616.9	1614.8	1610.5	1599.6	1586.6	1567.0	1551.9	1530.1	1506.2	1484.6	1475.9
17.5°	1595.3	1595.3	1588.7	1577.9	1560.6	1538.8	1514.9	1491.1	1465.0	1441.2	1430.2
20°	1567.0	1567.0	1558.3	1545.3	1528.0	1499.8	1473.8	1445.5	1415.1	1391.2	1380.4
22.5°	1525.8	1528.0	1517.2	1501.9	1482.4	1449.9	1423.8	1389.1	1358.7	1330.5	1321.8
25°	1471.5	1475.9	1465.0	1449.9	1423.8	1395.5	1363.1	1330.5	1295.8	1267.5	1254.5
27.5°	1408.6	1410.7	1399.9	1384.7	1358.7	1328.2	1295.8	1261.1	1228.5	1198.0	1185.1
30°	1339.2	1330.5	1326.1	1306.6	1278.4	1252.4	1215.4	1187.2	1152.5	1126.5	1111.2
32.5°	1241.4	1245.8	1232.8	1217.7	1195.9	1165.5	1135.1	1102.6	1070.0	1050.5	1039.7
35°	1143.8	1148.1	1141.7	1126.5	1102.6	1076.5	1046.1	1022.3	994.0	970.2	959.3
37.5°	1041.8	1041.8	1037.4	1028.7	1011.4	987.6	957.1	933.2	909.3	889.8	883.3
40°	939.8	935.4	933.2	926.7	911.6	889.8	870.3	850.8	826.9	813.9	805.2
42.5°	839.9	839.9	835.6	829.1	813.9	803.1	783.6	761.8	744.4	731.5	731.5
45°	748.8	751.0	744.4	740.2	731.5	714.1	696.8	681.5	666.3	657.6	653.2
47.5°	668.5	668.5	661.9	657.6	649.0	633.7	618.5	605.6	594.7	588.2	586.1
50°	592.5	592.5	592.5	581.7	570.8	560.0	549.1	533.9	527.4	523.0	520.9
52.5°	527.4	525.2	525.2	516.5	505.7	492.7	481.8	468.8	462.3	458.0	460.1
55°	468.8	468.8	466.7	455.7	444.9	432.0	421.0	410.2	405.9	401.5	403.7
56°	444.9	444.9	442.8	434.1	421.0	410.2	397.1	386.3	379.8	382.0	382.0
57°	427.6	423.3	423.3	412.3	401.5	386.3	375.5	364.7	360.3	358.1	358.1
58°	405.9	403.7	401.5	390.7	379.8	366.8	356.0	345.0	338.6	338.6	336.4
59°	384.2	384.2	379.8	371.1	360.3	347.3	336.4	325.5	319.0	316.9	316.9
60°	364.7	366.8	360.3	351.6	342.9	327.7	314.7	306.0	299.5	297.4	297.4
61°	347.3	347.3	342.9	332.1	321.3	310.3	297.4	286.5	282.1	277.9	277.9
62°	332.1	327.7	325.5	314.7	303.9	290.8	280.0	269.2	262.7	258.3	260.4
63°	312.6	310.3	306.0	297.4	286.5	273.5	260.4	251.7	245.3	238.8	240.9
64°	297.4	295.2	288.7	280.0	269.2	256.1	243.0	234.4	230.1	223.5	221.4
65°	277.9	275.6	273.5	262.7	251.7	238.8	227.9	219.3	212.7	208.3	204.0
66°	260.4	262.7	258.3	249.6	236.6	225.7	210.6	201.9	197.5	191.0	186.7
67°	245.3	245.3	240.9	232.2	219.3	208.3	197.5	186.7	180.1	173.6	171.5
67.5°	236.6	236.6	232.2	221.4	212.7	199.6	188.8	180.1	171.5	167.2	162.8
68°	227.9	227.9	225.7	217.0	206.2	193.2	182.3	171.5	162.8	156.2	154.1
69°	212.7	214.9	210.6	201.9	191.0	178.0	167.2	158.5	149.8	143.3	138.9
70°	199.6	197.5	193.2	184.5	173.6	164.9	154.1	143.3	134.6	125.9	123.7
71°	182.3	182.3	178.0	171.5	160.6	149.8	138.9	130.2	121.5	110.7	108.6
72°	169.3	169.3	164.9	156.2	147.6	136.7	125.9	115.0	108.6	97.6	93.3
72.5°	160.6	162.8	158.5	149.8	141.1	128.1	119.4	110.7	99.9	91.2	86.8
73°	156.2	154.1	152.0	143.3	132.3	123.7	112.8	104.2	93.3	84.7	80.3



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
77.5°	97.6	97.6	95.5	86.8	78.1	69.4	60.8	52.1	43.4	34.7	30.4
80°	67.3	69.4	65.2	60.8	54.2	45.5	36.9	30.4	21.8	17.4	13.1
82.5°	43.4	43.4	41.3	36.9	32.6	26.0	21.8	15.2	10.8	8.7	6.5
85°	21.8	23.9	21.8	19.5	15.2	13.1	10.8	6.5	4.4	2.1	2.1
87.5°	8.7	8.7	8.7	6.5	6.5	4.4	2.1	2.1	2.1	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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**CANDELA DISTRIBUTION (continued):**

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1601.7	1601.7	1601.7	1601.7	1601.7	1601.7	1601.7	1601.7	1601.7	1601.7
2.5°	1595.3	1595.3	1590.9	1588.7	1586.6	1584.3	1582.2	1580.1	1580.1	1582.2
5°	1582.2	1577.9	1569.2	1567.0	1560.6	1558.3	1554.0	1551.9	1554.0	1551.9
7.5°	1562.7	1554.0	1543.2	1538.8	1530.1	1525.8	1519.3	1519.3	1514.9	1517.2
10°	1536.7	1523.6	1510.6	1501.9	1495.4	1488.9	1484.6	1480.2	1478.0	1478.0
12.5°	1504.1	1488.9	1475.9	1462.8	1452.0	1447.6	1438.9	1438.9	1434.6	1432.5
15°	1467.2	1447.6	1432.5	1419.4	1410.7	1402.1	1395.5	1391.2	1386.8	1386.8
17.5°	1419.4	1402.1	1386.8	1371.7	1358.7	1352.1	1345.7	1339.2	1339.2	1334.8
20°	1367.4	1347.9	1334.8	1319.6	1308.7	1297.9	1289.2	1289.2	1284.8	1287.1
22.5°	1308.7	1284.8	1271.9	1261.1	1250.1	1241.4	1232.8	1232.8	1230.6	1228.5
25°	1243.7	1224.1	1209.0	1195.9	1189.4	1180.7	1178.5	1174.1	1172.0	1172.0
27.5°	1174.1	1159.0	1139.4	1133.0	1124.3	1119.9	1119.9	1117.8	1113.4	1115.6
30°	1100.4	1083.1	1072.2	1067.8	1059.2	1059.2	1057.0	1052.6	1052.6	1054.8
32.5°	1028.7	1011.4	1002.7	1000.5	991.9	991.9	989.7	991.9	991.9	994.0
35°	950.6	935.4	933.2	926.7	924.6	924.6	924.6	929.0	933.2	926.7
37.5°	876.9	865.9	859.5	857.3	859.5	859.5	861.7	868.2	865.9	863.8
40°	800.9	792.2	787.8	787.8	792.2	796.5	796.5	803.1	805.2	803.1
42.5°	724.9	718.4	718.4	720.5	724.9	727.1	733.6	740.2	742.3	744.4
45°	653.2	653.2	653.2	655.5	657.6	661.9	670.7	677.1	679.4	681.5
47.5°	583.8	581.7	588.2	590.3	596.9	599.0	605.6	614.2	616.4	618.5
50°	518.8	523.0	525.2	531.7	536.1	536.1	544.8	549.1	555.6	555.6
52.5°	458.0	464.4	466.7	473.1	475.4	477.5	481.8	488.3	492.7	492.7
55°	403.7	405.9	410.2	412.3	418.9	421.0	425.4	427.6	434.1	432.0
56°	379.8	384.2	386.3	390.7	395.0	397.1	401.5	403.7	408.1	410.2
57°	358.1	360.3	366.8	368.9	373.3	373.3	375.5	382.0	382.0	384.2
58°	336.4	340.8	342.9	345.0	349.4	351.6	356.0	358.1	360.3	358.1
59°	316.9	319.0	321.3	321.3	325.5	325.5	332.1	336.4	338.6	338.6
60°	297.4	297.4	299.5	301.6	306.0	308.2	308.2	312.6	312.6	312.6
61°	277.9	277.9	280.0	282.1	284.3	284.3	288.7	288.7	290.8	293.0
62°	260.4	258.3	258.3	260.4	260.4	264.8	266.9	269.2	271.3	269.2
63°	240.9	238.8	238.8	238.8	238.8	243.0	243.0	245.3	249.6	247.4
64°	219.3	219.3	219.3	219.3	221.4	221.4	225.7	227.9	230.1	232.2
65°	204.0	199.6	197.5	197.5	199.6	201.9	204.0	206.2	208.3	208.3
66°	186.7	182.3	180.1	180.1	180.1	180.1	184.5	184.5	188.8	188.8
67°	167.2	162.8	160.6	158.5	158.5	158.5	164.9	162.8	162.8	162.8
67.5°	160.6	154.1	152.0	149.8	147.6	152.0	149.8	152.0	152.0	149.8
68°	152.0	147.6	143.3	138.9	138.9	138.9	141.1	143.3	141.1	138.9
69°	134.6	132.3	125.9	121.5	119.4	121.5	119.4	121.5	119.4	121.5
70°	119.4	112.8	106.3	104.2	102.0	102.0	102.0	99.9	102.0	99.9
71°	104.2	97.6	91.2	86.8	84.7	84.7	82.5	84.7	82.5	84.7
72°	88.9	82.5	73.8	69.4	69.4	69.4	69.4	67.3	69.4	67.3
72.5°	82.5	73.8	67.3	62.9	60.8	60.8	60.8	60.8	58.6	60.8
73°	76.0	67.3	58.6	56.5	56.5	56.5	54.2	52.1	54.2	54.2





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**CANDELA DISTRIBUTION (continued):**

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
77.5°	26.0	19.5	17.4	17.4	17.4	17.4	17.4	17.4	15.2	15.2
80°	10.8	8.7	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
82.5°	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
85°	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
87.5°	0.0	0.0	0.0	0.0	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	0.0



Report Generated By 670245859 / DESKTOP-HRDQ47P





— 0°-180°    - - 45°-225°    - - - - 90°-270°







74°	141.1	141.1	136.7	130.2	119.4	108.6	99.9	91.2	80.3	69.4	65.2
75°	130.2	128.1	123.7	117.2	108.6	97.6	88.9	78.1	69.4	58.6	54.2







74°	62.9	52.1	47.8	43.4	43.4	43.4	41.3	41.3	41.3	43.4
75°	49.9	41.3	36.9	32.6	34.7	32.6	34.7	32.6	32.6	32.6



(END OF REPORT)