

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: P584226

Luminaire Tested: **HC825D010-HM82555940-81RWWH**

Issue Date: 10/21/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P584226  
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: HC825D010-HM82555940-81RWWH  
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, HAZE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2438.5 lumens  
Efficiency: N/A  
Efficacy: 91.0 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

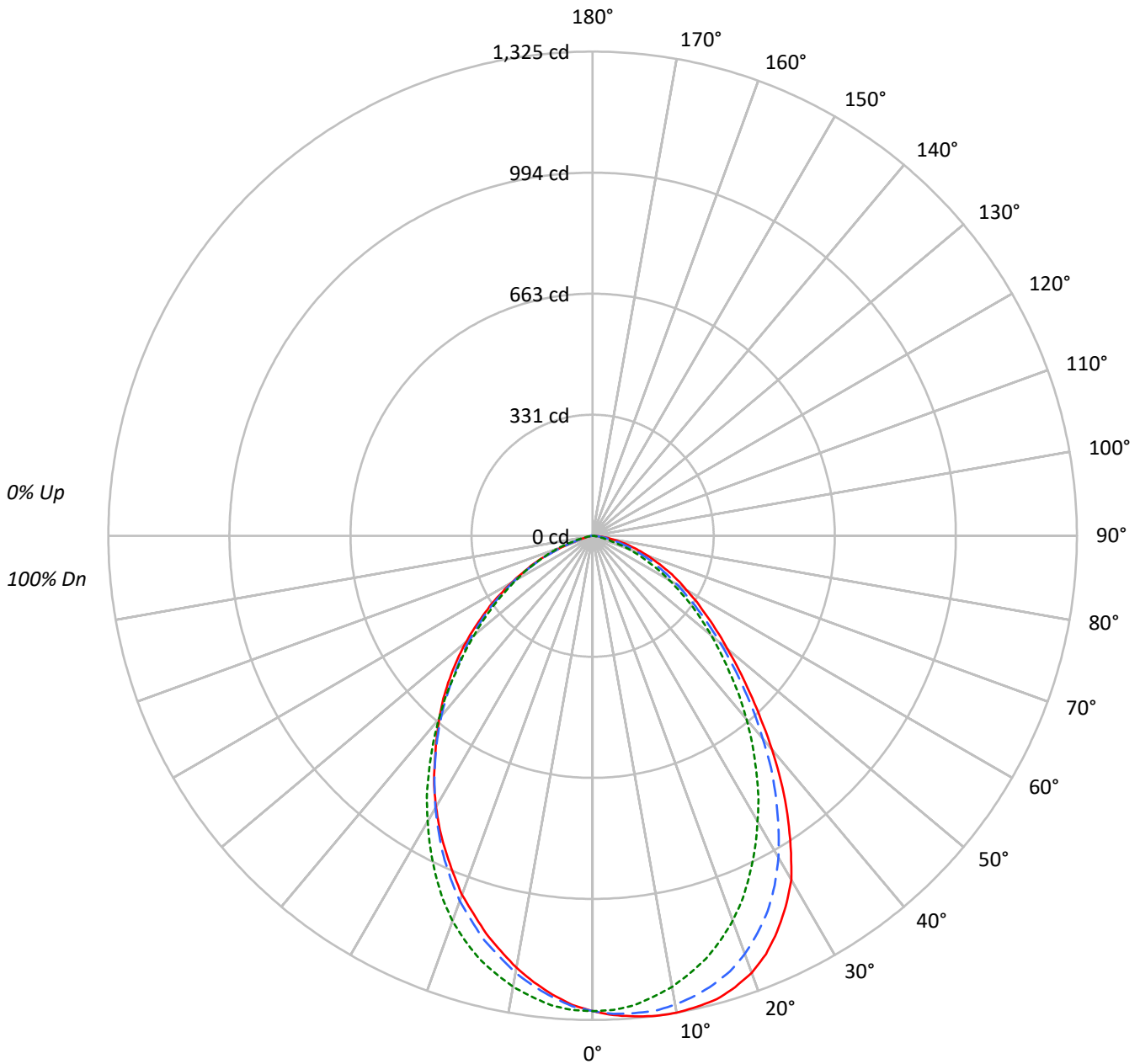
Input Watts (W): 26.8  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P584226

CATALOG NUMBER: HC825D010-HM82555940-81RWWH

### Luminous Intensity Polar Plot





TEST NUMBER: P584226

CATALOG NUMBER: HC825D010-HM82555940-81RWWH

**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20									20									20									20									
RC	80									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	100	108	105	102	99	101	98	96	97	95	93	93	92	90	88																			
2	103	96	90	85	100	94	89	84	90	86	82	87	84	80	84	81	79	77																			
3	95	86	79	73	92	84	78	73	81	76	71	79	74	70	76	72	69	67																			
4	88	77	70	64	86	76	69	63	74	67	63	71	66	62	69	65	61	59																			
5	81	70	62	56	79	69	62	56	67	60	55	65	59	55	63	58	54	52																			
6	76	64	56	50	74	63	55	50	61	54	49	60	54	49	58	53	49	47																			
7	71	58	51	45	69	58	50	45	56	49	45	55	49	44	54	48	44	42																			
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38																			
9	62	50	42	37	61	49	42	37	48	41	37	47	41	37	46	41	36	35																			
10	58	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32																			

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

	0°	90°	180°
0°	40112	40112	40112
5°	40866	39937	39008
10°	41501	39240	37584
15°	41920	38261	35956
20°	41761	36786	34299
25°	40659	34660	32384
30°	38722	32131	30501
35°	34968	29329	28331
40°	30722	26322	26254
45°	26519	23135	24133
50°	23085	20292	21645
55°	20467	17623	18854
60°	18261	14894	15653
65°	16468	12083	12346
70°	14615	9061	7312
75°	12593	5254	3145
80°	9714	1882	923
85°	6262	601	601



TEST NUMBER: P584226

CATALOG NUMBER: HC825D010-HM82555940-81RWWH

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	122.1	5.0
10°-20°	339.9	13.9
20°-30°	480.8	19.7
30°-40°	506.6	20.8
40°-50°	430.6	17.7
50°-60°	310.0	12.7
60°-70°	178.9	7.3
70°-80°	61.2	2.5
80°-90°	8.4	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°	942.8	38.7
0°-40°	1449.5	59.4
0°-60°	2190.1	89.8
0°-90°	2438.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2438.5	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1301	1301	1301	1301	1301	
5°	1320	1311	1290	1267	1260	126
15°	1313	1273	1198	1146	1126	370
25°	1195	1133	1019	966	952	548
35°	929	874	779	751	753	578
45°	608	580	530	534	553	472
55°	381	351	328	340	351	343
65°	226	194	166	162	169	224
75°	106	79	44	28	26	112
85°	18	11	2	2	2	24
90°	0	0	0	0	0	



TEST NUMBER: P584226

CATALOG NUMBER: HC825D010-HM82555940-81RWWH

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	1300.8	1300.8	1300.8	1300.8	1300.8	1300.8	1300.8	1300.8	1300.8	1300.8	1300.8
2.5°	1313.1	1314.9	1313.1	1313.1	1311.4	1309.6	1307.9	1306.0	1302.5	1299.0	1299.0
5°	1320.2	1323.7	1320.2	1320.2	1314.9	1311.4	1307.9	1302.5	1295.4	1290.2	1290.2
7.5°	1325.4	1325.4	1325.4	1320.2	1316.6	1311.4	1302.5	1293.7	1285.0	1276.1	1272.6
10°	1325.4	1325.4	1323.7	1316.6	1313.1	1302.5	1293.7	1281.4	1269.0	1256.7	1253.2
12.5°	1320.2	1322.0	1318.5	1311.4	1302.5	1290.2	1277.9	1262.0	1247.9	1233.8	1226.8
15°	1313.1	1311.4	1307.9	1299.0	1288.5	1272.6	1260.2	1242.6	1223.2	1205.6	1198.5
17.5°	1295.4	1295.4	1290.2	1281.4	1267.3	1249.7	1230.3	1210.9	1189.7	1170.4	1161.6
20°	1272.6	1272.6	1265.5	1255.0	1240.9	1218.0	1196.8	1173.9	1149.2	1129.8	1121.0
22.5°	1239.1	1240.9	1232.0	1219.7	1203.9	1177.4	1156.2	1128.1	1103.4	1080.5	1073.4
25°	1195.0	1198.5	1189.7	1177.4	1156.2	1133.3	1106.9	1080.5	1052.2	1029.3	1018.7
27.5°	1143.9	1145.6	1136.9	1124.6	1103.4	1078.7	1052.2	1024.1	997.7	973.0	962.4
30°	1087.5	1080.5	1077.0	1061.1	1038.1	1017.0	987.1	964.2	935.9	914.7	902.4
32.5°	1008.2	1011.7	1001.1	988.8	971.1	946.5	921.8	895.4	868.9	853.1	844.2
35°	928.9	932.4	927.2	914.7	895.4	874.2	849.6	830.2	807.2	787.8	779.1
37.5°	846.0	846.0	842.5	835.5	821.3	802.0	777.2	757.9	738.5	722.7	717.3
40°	763.2	759.7	757.9	752.6	740.3	722.7	706.8	690.9	671.5	660.9	653.9
42.5°	682.1	682.1	678.6	673.4	660.9	652.2	636.3	618.7	604.6	594.0	594.0
45°	608.1	609.9	604.6	601.0	594.0	579.9	565.8	553.4	541.1	534.0	530.5
47.5°	542.9	542.9	537.6	534.0	527.0	514.7	502.4	491.8	483.0	477.6	475.9
50°	481.2	481.2	481.2	472.4	463.5	454.8	446.0	433.6	428.3	424.8	423.0
52.5°	428.3	426.5	426.5	419.5	410.7	400.1	391.3	380.7	375.5	371.9	373.6
55°	380.7	380.7	379.0	370.1	361.3	350.7	342.0	333.1	329.6	326.0	327.8
56°	361.3	361.3	359.5	352.6	342.0	333.1	322.6	313.7	308.5	310.2	310.2
57°	347.2	343.7	343.7	334.9	326.0	313.7	305.0	296.1	292.5	290.8	290.8
58°	329.6	327.8	326.0	317.3	308.5	297.9	289.1	280.2	275.0	275.0	273.2
59°	312.0	312.0	308.5	301.4	292.5	282.1	273.2	264.4	259.0	257.3	257.3
60°	296.1	297.9	292.5	285.6	278.5	266.1	255.6	248.6	243.2	241.5	241.5
61°	282.1	282.1	278.5	269.6	260.9	252.1	241.5	232.6	229.1	225.7	225.7
62°	269.6	266.1	264.4	255.6	246.7	236.1	227.4	218.6	213.3	209.7	211.5
63°	253.8	252.1	248.6	241.5	232.6	222.1	211.5	204.5	199.1	193.9	195.6
64°	241.5	239.7	234.4	227.4	218.6	208.0	197.4	190.4	186.8	181.6	179.8
65°	225.7	223.8	222.1	213.3	204.5	193.9	185.1	178.0	172.7	169.2	165.6
66°	211.5	213.3	209.7	202.7	192.2	183.3	171.0	163.9	160.4	155.2	151.6
67°	199.1	199.1	195.6	188.6	178.0	169.2	160.4	151.6	146.3	141.0	139.2
67.5°	192.2	192.2	188.6	179.8	172.7	162.1	153.3	146.3	139.2	135.7	132.1
68°	185.1	185.1	183.3	176.2	167.5	156.9	148.1	139.2	132.1	126.9	125.2
69°	172.7	174.5	171.0	163.9	155.2	144.6	135.7	128.7	121.7	116.3	112.8
70°	162.1	160.4	156.9	149.8	141.0	134.0	125.2	116.3	109.2	102.2	100.5
71°	148.1	148.1	144.6	139.2	130.4	121.7	112.8	105.7	98.7	89.9	88.2
72°	137.5	137.5	134.0	126.9	119.8	111.1	102.2	93.4	88.2	79.3	75.8
72.5°	130.4	132.1	128.7	121.7	114.6	104.0	96.9	89.9	81.1	74.0	70.5
73°	126.9	125.2	123.4	116.3	107.5	100.5	91.7	84.6	75.8	68.7	65.2



TEST NUMBER: P584226

CATALOG NUMBER: HC825D010-HM82555940-81RWWH

**CANDELA DISTRIBUTION (continued):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
77.5°	79.3	79.3	77.6	70.5	63.5	56.4	49.3	42.3	35.2	28.2	24.7
80°	54.7	56.4	52.9	49.3	44.1	37.0	30.0	24.7	17.7	14.1	10.6
82.5°	35.2	35.2	33.5	30.0	26.4	21.2	17.7	12.3	8.8	7.1	5.2
85°	17.7	19.4	17.7	15.8	12.3	10.6	8.8	5.2	3.5	1.7	1.7
87.5°	7.1	7.1	7.1	5.2	5.2	3.5	1.7	1.7	1.7	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



TEST NUMBER: P584226

CATALOG NUMBER: HC825D010-HM82555940-81RWWH

**CANDELA DISTRIBUTION (continued):**

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1300.8	1300.8	1300.8	1300.8	1300.8	1300.8	1300.8	1300.8	1300.8	1300.8
2.5°	1295.4	1295.4	1291.9	1290.2	1288.5	1286.7	1285.0	1283.1	1283.1	1285.0
5°	1285.0	1281.4	1274.4	1272.6	1267.3	1265.5	1262.0	1260.2	1262.0	1260.2
7.5°	1269.0	1262.0	1253.2	1249.7	1242.6	1239.1	1233.8	1233.8	1230.3	1232.0
10°	1247.9	1237.3	1226.8	1219.7	1214.4	1209.1	1205.6	1202.0	1200.3	1200.3
12.5°	1221.5	1209.1	1198.5	1188.0	1179.1	1175.6	1168.5	1168.5	1165.0	1163.3
15°	1191.6	1175.6	1163.3	1152.7	1145.6	1138.6	1133.3	1129.8	1126.3	1126.3
17.5°	1152.7	1138.6	1126.3	1114.0	1103.4	1098.0	1092.8	1087.5	1087.5	1084.0
20°	1110.4	1094.6	1084.0	1071.6	1062.8	1054.1	1047.0	1047.0	1043.5	1045.2
22.5°	1062.8	1043.5	1032.9	1024.1	1015.2	1008.2	1001.1	1001.1	999.4	997.7
25°	1010.0	994.1	981.7	971.1	965.9	958.8	957.1	953.6	951.8	951.8
27.5°	953.6	941.2	925.3	920.1	913.0	909.5	909.5	907.7	904.2	906.0
30°	893.7	879.5	870.8	867.2	860.2	860.2	858.4	854.8	854.8	856.6
32.5°	835.5	821.3	814.3	812.6	805.5	805.5	803.8	805.5	805.5	807.2
35°	772.0	759.7	757.9	752.6	750.8	750.8	750.8	754.4	757.9	752.6
37.5°	712.1	703.3	698.0	696.2	698.0	698.0	699.8	705.0	703.3	701.5
40°	650.3	643.4	639.9	639.9	643.4	646.8	646.8	652.2	653.9	652.2
42.5°	588.7	583.4	583.4	585.2	588.7	590.4	595.8	601.0	602.8	604.6
45°	530.5	530.5	530.5	532.3	534.0	537.6	544.6	549.9	551.7	553.4
47.5°	474.1	472.4	477.6	479.5	484.7	486.4	491.8	498.8	500.5	502.4
50°	421.3	424.8	426.5	431.9	435.4	435.4	442.4	446.0	451.2	451.2
52.5°	371.9	377.2	379.0	384.2	386.1	387.8	391.3	396.5	400.1	400.1
55°	327.8	329.6	333.1	334.9	340.2	342.0	345.5	347.2	352.6	350.7
56°	308.5	312.0	313.7	317.3	320.8	322.6	326.0	327.8	331.4	333.1
57°	290.8	292.5	297.9	299.6	303.1	303.1	305.0	310.2	310.2	312.0
58°	273.2	276.7	278.5	280.2	283.8	285.6	289.1	290.8	292.5	290.8
59°	257.3	259.0	260.9	260.9	264.4	264.4	269.6	273.2	275.0	275.0
60°	241.5	241.5	243.2	245.0	248.6	250.3	250.3	253.8	253.8	253.8
61°	225.7	225.7	227.4	229.1	230.9	230.9	234.4	234.4	236.1	238.0
62°	211.5	209.7	209.7	211.5	211.5	215.1	216.8	218.6	220.3	218.6
63°	195.6	193.9	193.9	193.9	193.9	197.4	197.4	199.1	202.7	200.9
64°	178.0	178.0	178.0	178.0	179.8	179.8	183.3	185.1	186.8	188.6
65°	165.6	162.1	160.4	160.4	162.1	163.9	165.6	167.5	169.2	169.2
66°	151.6	148.1	146.3	146.3	146.3	146.3	149.8	149.8	153.3	153.3
67°	135.7	132.1	130.4	128.7	128.7	128.7	134.0	132.1	132.1	132.1
67.5°	130.4	125.2	123.4	121.7	119.8	123.4	121.7	123.4	123.4	121.7
68°	123.4	119.8	116.3	112.8	112.8	112.8	114.6	116.3	114.6	112.8
69°	109.2	107.5	102.2	98.7	96.9	98.7	96.9	98.7	96.9	98.7
70°	96.9	91.7	86.3	84.6	82.8	82.8	82.8	81.1	82.8	81.1
71°	84.6	79.3	74.0	70.5	68.7	68.7	67.0	68.7	67.0	68.7
72°	72.2	67.0	59.9	56.4	56.4	56.4	56.4	54.7	56.4	54.7
72.5°	67.0	59.9	54.7	51.1	49.3	49.3	49.3	49.3	47.6	49.3
73°	61.7	54.7	47.6	45.8	45.8	45.8	44.1	42.3	44.1	44.1





TEST NUMBER: P584226

CATALOG NUMBER: HC825D010-HM82555940-81RWWH

**CANDELA DISTRIBUTION (continued):**

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
77.5°	21.2	15.8	14.1	14.1	14.1	14.1	14.1	14.1	12.3	12.3
80°	8.8	7.1	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
82.5°	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
85°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
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°	114.6	114.6	111.1	105.7	96.9	88.2	81.1	74.0	65.2	56.4	52.9
75°	105.7	104.0	100.5	95.2	88.2	79.3	72.2	63.5	56.4	47.6	44.1







74°	51.1	42.3	38.7	35.2	35.2	35.2	33.5	33.5	33.5	35.2
75°	40.6	33.5	30.0	26.4	28.2	26.4	28.2	26.4	26.4	26.4



(END OF REPORT)