

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: P584311

Luminaire Tested: **HC830D010-HM82555927-81RWWH**

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P584311
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-HM82555927-81RWWH
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2479.4 lumens
Efficiency: N/A
Efficacy: 88.5 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

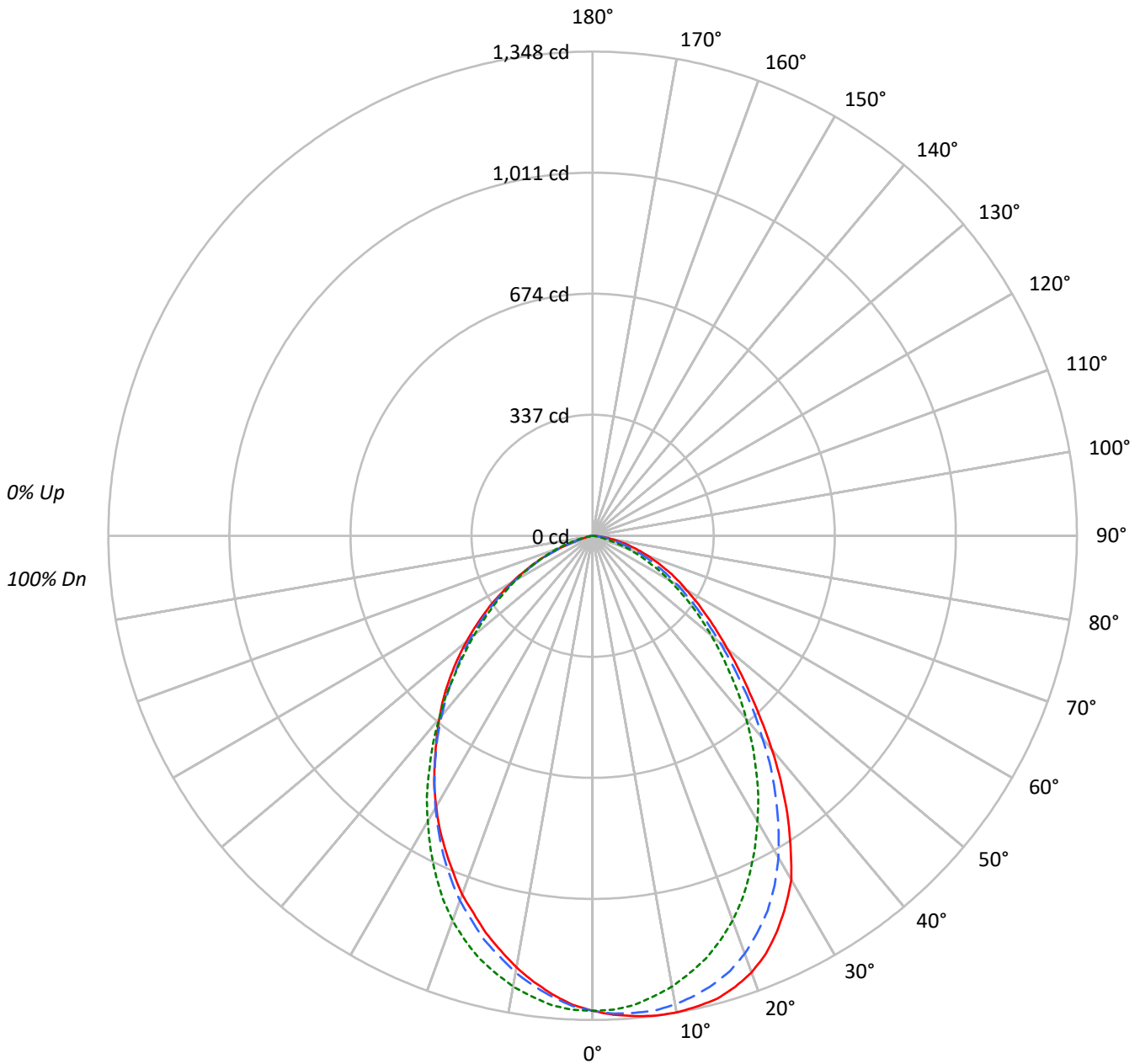
Input Watts (W): 28
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	40781	40781	40781
5°	41550	40606	39665
10°	42196	39895	38213
15°	42622	38903	36556
20°	42460	37403	34873
25°	41339	35246	32925
30°	39370	32673	31010
35°	35551	29818	28805
40°	31233	26765	26692
45°	26964	23523	24543
50°	23473	20633	22005
55°	20811	17919	19171
60°	18570	15141	15912
65°	16738	12295	12550
70°	14867	9205	7429
75°	12808	5338	3205
80°	9856	1900	959
85°	6369	637	637



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	124.2	5.0
10°-20°	345.6	13.9
20°-30°	488.8	19.7
30°-40°	515.1	20.8
40°-50°	437.8	17.7
50°-60°	315.2	12.7
60°-70°	181.8	7.3
70°-80°	62.2	2.5
80°-90°	8.6	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°	958.6	38.7
0°-40°	1473.7	59.4
0°-60°	2226.7	89.8
0°-90°	2479.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2479.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1322	1322	1322	1322	1322	
5°	1342	1333	1312	1288	1281	128
15°	1335	1294	1219	1165	1145	376
25°	1215	1152	1036	982	968	557
35°	944	889	792	764	765	588
45°	618	590	539	543	563	480
55°	387	357	333	346	357	348
65°	229	197	168	165	172	228
75°	108	81	45	29	27	113
85°	18	11	2	2	2	24
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°	1322.5	1322.5	1322.5	1322.5	1322.5	1322.5	1322.5	1322.5	1322.5	1322.5	1322.5
2.5°	1335.1	1336.9	1335.1	1335.1	1333.3	1331.6	1329.7	1327.9	1324.3	1320.7	1320.7
5°	1342.3	1345.8	1342.3	1342.3	1336.9	1333.3	1329.7	1324.3	1317.2	1311.8	1311.8
7.5°	1347.6	1347.6	1347.6	1342.3	1338.7	1333.3	1324.3	1315.4	1306.5	1297.4	1293.9
10°	1347.6	1347.6	1345.8	1338.7	1335.1	1324.3	1315.4	1302.8	1290.3	1277.7	1274.1
12.5°	1342.3	1344.0	1340.5	1333.3	1324.3	1311.8	1299.2	1283.2	1268.8	1254.4	1247.3
15°	1335.1	1333.3	1329.7	1320.7	1310.0	1293.9	1281.4	1263.4	1243.7	1225.7	1218.6
17.5°	1317.2	1317.2	1311.8	1302.8	1288.5	1270.6	1250.8	1231.2	1209.7	1190.0	1181.0
20°	1293.9	1293.9	1286.7	1275.9	1261.6	1238.3	1216.8	1193.5	1168.4	1148.7	1139.8
22.5°	1259.9	1261.6	1252.6	1240.1	1224.0	1197.1	1175.6	1146.9	1121.8	1098.5	1091.4
25°	1215.0	1218.6	1209.7	1197.1	1175.6	1152.3	1125.4	1098.5	1069.9	1046.6	1035.9
27.5°	1163.1	1164.9	1155.8	1143.3	1121.8	1096.7	1069.9	1041.2	1014.3	989.2	978.4
30°	1105.7	1098.5	1095.0	1078.8	1055.5	1034.1	1003.5	980.2	951.6	930.0	917.6
32.5°	1025.0	1028.6	1017.9	1005.3	987.5	962.4	937.3	910.4	883.5	867.4	858.5
35°	944.4	948.0	942.6	930.0	910.4	888.9	863.8	844.1	820.8	801.0	792.1
37.5°	860.2	860.2	856.6	849.4	835.2	815.4	790.3	770.6	750.9	734.8	729.3
40°	775.9	772.4	770.6	765.2	752.6	734.8	718.6	702.5	682.7	672.0	664.9
42.5°	693.5	693.5	690.0	684.6	672.0	663.1	646.9	629.0	614.7	603.9	603.9
45°	618.3	620.1	614.7	611.1	603.9	589.6	575.2	562.8	550.2	543.0	539.4
47.5°	551.9	551.9	546.6	543.0	535.9	523.3	510.8	500.0	491.1	485.7	483.8
50°	489.3	489.3	489.3	480.2	471.3	462.4	453.4	440.9	435.5	431.8	430.1
52.5°	435.5	433.6	433.6	426.5	417.6	406.8	397.8	387.1	381.7	378.1	379.9
55°	387.1	387.1	385.2	376.3	367.4	356.6	347.7	338.7	335.1	331.5	333.3
56°	367.4	367.4	365.6	358.4	347.7	338.7	327.9	319.0	313.7	315.4	315.4
57°	353.0	349.4	349.4	340.5	331.5	319.0	310.0	301.1	297.5	295.7	295.7
58°	335.1	333.3	331.5	322.6	313.7	302.8	293.9	284.9	279.5	279.5	277.8
59°	317.2	317.2	313.7	306.4	297.5	286.8	277.8	268.8	263.5	261.7	261.7
60°	301.1	302.8	297.5	290.4	283.1	270.6	259.8	252.7	247.3	245.5	245.5
61°	286.8	286.8	283.1	274.2	265.3	256.2	245.5	236.6	232.9	229.4	229.4
62°	274.2	270.6	268.8	259.8	250.9	240.2	231.1	222.2	216.9	213.3	215.1
63°	258.0	256.2	252.7	245.5	236.6	225.8	215.1	207.8	202.5	197.1	198.9
64°	245.5	243.7	238.4	231.1	222.2	211.5	200.7	193.6	190.0	184.5	182.7
65°	229.4	227.6	225.8	216.9	207.8	197.1	188.2	181.0	175.6	172.0	168.5
66°	215.1	216.9	213.3	206.1	195.4	186.3	173.8	166.7	163.1	157.7	154.1
67°	202.5	202.5	198.9	191.8	181.0	172.0	163.1	154.1	148.7	143.4	141.6
67.5°	195.4	195.4	191.8	182.7	175.6	164.9	155.9	148.7	141.6	138.0	134.4
68°	188.2	188.2	186.3	179.2	170.3	159.4	150.5	141.6	134.4	129.0	127.2
69°	175.6	177.4	173.8	166.7	157.7	147.0	138.0	130.8	123.7	118.3	114.7
70°	164.9	163.1	159.4	152.3	143.4	136.1	127.2	118.3	111.1	103.9	102.1
71°	150.5	150.5	147.0	141.6	132.6	123.7	114.7	107.5	100.4	91.4	89.7
72°	139.8	139.8	136.1	129.0	121.9	113.0	103.9	95.0	89.7	80.6	77.0
72.5°	132.6	134.4	130.8	123.7	116.5	105.7	98.6	91.4	82.4	75.3	71.7
73°	129.0	127.2	125.4	118.3	109.3	102.1	93.2	86.0	77.0	69.9	66.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
77.5°	80.6	80.6	78.8	71.7	64.6	57.3	50.2	43.0	35.8	28.7	25.1
80°	55.5	57.3	53.7	50.2	44.8	37.7	30.4	25.1	18.0	14.4	10.7
82.5°	35.8	35.8	34.0	30.4	26.9	21.5	18.0	12.6	8.9	7.1	5.4
85°	18.0	19.7	18.0	16.2	12.6	10.7	8.9	5.4	3.6	1.8	1.8
87.5°	7.1	7.1	7.1	5.4	5.4	3.6	1.8	1.8	1.8	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°	1322.5	1322.5	1322.5	1322.5	1322.5	1322.5	1322.5	1322.5	1322.5	1322.5
2.5°	1317.2	1317.2	1313.6	1311.8	1310.0	1308.3	1306.5	1304.6	1304.6	1306.5
5°	1306.5	1302.8	1295.7	1293.9	1288.5	1286.7	1283.2	1281.4	1283.2	1281.4
7.5°	1290.3	1283.2	1274.1	1270.6	1263.4	1259.9	1254.4	1254.4	1250.8	1252.6
10°	1268.8	1258.1	1247.3	1240.1	1234.8	1229.3	1225.7	1222.2	1220.4	1220.4
12.5°	1241.9	1229.3	1218.6	1207.9	1198.9	1195.3	1188.2	1188.2	1184.6	1182.8
15°	1211.5	1195.3	1182.8	1172.0	1164.9	1157.7	1152.3	1148.7	1145.1	1145.1
17.5°	1172.0	1157.7	1145.1	1132.6	1121.8	1116.5	1111.1	1105.7	1105.7	1102.1
20°	1129.0	1112.9	1102.1	1089.6	1080.6	1071.6	1064.5	1064.5	1060.9	1062.7
22.5°	1080.6	1060.9	1050.1	1041.2	1032.3	1025.0	1017.9	1017.9	1016.1	1014.3
25°	1026.8	1010.8	998.2	987.5	982.1	974.9	973.1	969.5	967.7	967.7
27.5°	969.5	956.9	940.9	935.5	928.3	924.7	924.7	922.9	919.3	921.1
30°	908.6	894.2	885.3	881.6	874.5	874.5	872.7	869.2	869.2	870.9
32.5°	849.4	835.2	827.9	826.1	819.0	819.0	817.2	819.0	819.0	820.8
35°	785.0	772.4	770.6	765.2	763.5	763.5	763.5	767.0	770.6	765.2
37.5°	724.0	715.1	709.7	707.8	709.7	709.7	711.5	716.8	715.1	713.3
40°	661.3	654.1	650.5	650.5	654.1	657.6	657.6	663.1	664.9	663.1
42.5°	598.5	593.2	593.2	595.0	598.5	600.3	605.7	611.1	612.9	614.7
45°	539.4	539.4	539.4	541.2	543.0	546.6	553.7	559.1	561.0	562.8
47.5°	482.0	480.2	485.7	487.5	492.8	494.6	500.0	507.1	508.9	510.8
50°	428.3	431.8	433.6	439.1	442.7	442.7	449.8	453.4	458.7	458.7
52.5°	378.1	383.5	385.2	390.7	392.5	394.3	397.8	403.2	406.8	406.8
55°	333.3	335.1	338.7	340.5	345.9	347.7	351.2	353.0	358.4	356.6
56°	313.7	317.2	319.0	322.6	326.1	327.9	331.5	333.3	337.0	338.7
57°	295.7	297.5	302.8	304.6	308.2	308.2	310.0	315.4	315.4	317.2
58°	277.8	281.3	283.1	284.9	288.6	290.4	293.9	295.7	297.5	295.7
59°	261.7	263.5	265.3	265.3	268.8	268.8	274.2	277.8	279.5	279.5
60°	245.5	245.5	247.3	249.1	252.7	254.4	254.4	258.0	258.0	258.0
61°	229.4	229.4	231.1	232.9	234.7	234.7	238.4	238.4	240.2	242.0
62°	215.1	213.3	213.3	215.1	215.1	218.7	220.4	222.2	224.0	222.2
63°	198.9	197.1	197.1	197.1	197.1	200.7	200.7	202.5	206.1	204.3
64°	181.0	181.0	181.0	181.0	182.7	182.7	186.3	188.2	190.0	191.8
65°	168.5	164.9	163.1	163.1	164.9	166.7	168.5	170.3	172.0	172.0
66°	154.1	150.5	148.7	148.7	148.7	148.7	152.3	152.3	155.9	155.9
67°	138.0	134.4	132.6	130.8	130.8	130.8	136.1	134.4	134.4	134.4
67.5°	132.6	127.2	125.4	123.7	121.9	125.4	123.7	125.4	125.4	123.7
68°	125.4	121.9	118.3	114.7	114.7	114.7	116.5	118.3	116.5	114.7
69°	111.1	109.3	103.9	100.4	98.6	100.4	98.6	100.4	98.6	100.4
70°	98.6	93.2	87.9	86.0	84.2	84.2	84.2	82.4	84.2	82.4
71°	86.0	80.6	75.3	71.7	69.9	69.9	68.1	69.9	68.1	69.9
72°	73.5	68.1	60.9	57.3	57.3	57.3	57.3	55.5	57.3	55.5
72.5°	68.1	60.9	55.5	52.0	50.2	50.2	50.2	50.2	48.4	50.2
73°	62.8	55.5	48.4	46.6	46.6	46.6	44.8	43.0	44.8	44.8



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CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
77.5°	21.5	16.2	14.4	14.4	14.4	14.4	14.4	14.4	12.6	12.6
80°	8.9	7.1	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4
82.5°	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
85°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
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°	116.5	116.5	113.0	107.5	98.6	89.7	82.4	75.3	66.3	57.3	53.7
75°	107.5	105.7	102.1	96.8	89.7	80.6	73.5	64.6	57.3	48.4	44.8





74°	52.0	43.0	39.5	35.8	35.8	35.8	34.0	34.0	34.0	35.8
75°	41.3	34.0	30.4	26.9	28.7	26.9	28.7	26.9	26.9	26.9



(END OF REPORT)