

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: P584447

Luminaire Tested: **HC835D010-HM82555927-81RWWH**

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P584447
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: HC835D010-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: 2979.6 lumens
Efficiency: N/A
Efficacy: 88.4 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

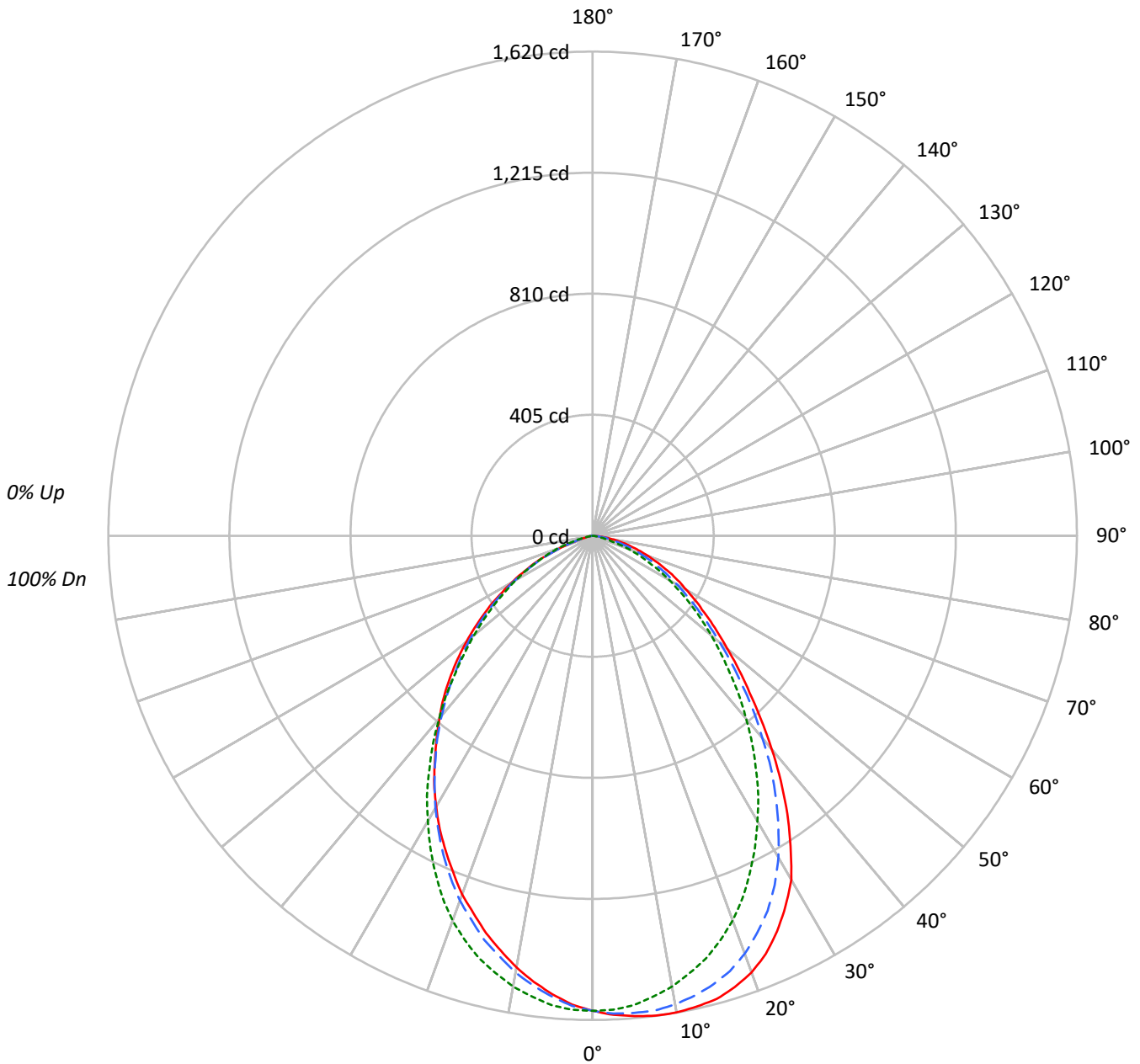
Input Watts (W): 33.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	49011	49011	49011
5°	49932	48796	47666
10°	50713	47948	45922
15°	51222	46750	43931
20°	51025	44947	41908
25°	49679	42353	39570
30°	47314	39260	37270
35°	42726	35834	34618
40°	37537	32159	32074
45°	32402	28267	29493
50°	28208	24792	26447
55°	25010	21537	23037
60°	22313	18200	19131
65°	20116	14775	15089
70°	17861	11072	8935
75°	15405	6410	3848
80°	11845	2291	1154
85°	7642	778	778



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	149.2	5.0
10°-20°	415.4	13.9
20°-30°	587.5	19.7
30°-40°	619.0	20.8
40°-50°	526.1	17.7
50°-60°	378.8	12.7
60°-70°	218.5	7.3
70°-80°	74.8	2.5
80°-90°	10.3	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°	1152.0	38.7
0°-40°	1771.1	59.4
0°-60°	2676.0	89.8
0°-90°	2979.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2979.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1589	1589	1589	1589	1589	
5°	1613	1602	1576	1548	1540	154
15°	1604	1555	1464	1400	1376	452
25°	1460	1385	1245	1180	1163	670
35°	1135	1068	952	917	920	707
45°	743	708	648	653	676	577
55°	465	428	401	416	428	419
65°	276	237	202	198	207	274
75°	129	97	54	34	32	136
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°	1589.4	1589.4	1589.4	1589.4	1589.4	1589.4	1589.4	1589.4	1589.4	1589.4	1589.4
2.5°	1604.5	1606.6	1604.5	1604.5	1602.3	1600.2	1598.0	1595.9	1591.5	1587.2	1587.2
5°	1613.1	1617.4	1613.1	1613.1	1606.6	1602.3	1598.0	1591.5	1582.9	1576.4	1576.4
7.5°	1619.6	1619.6	1619.6	1613.1	1608.8	1602.3	1591.5	1580.8	1570.0	1559.2	1554.9
10°	1619.6	1619.6	1617.4	1608.8	1604.5	1591.5	1580.8	1565.7	1550.6	1535.6	1531.3
12.5°	1613.1	1615.3	1611.0	1602.3	1591.5	1576.4	1561.4	1542.1	1524.8	1507.6	1498.9
15°	1604.5	1602.3	1598.0	1587.2	1574.3	1554.9	1539.9	1518.3	1494.6	1473.1	1464.4
17.5°	1582.9	1582.9	1576.4	1565.7	1548.4	1527.0	1503.3	1479.5	1453.7	1430.1	1419.3
20°	1554.9	1554.9	1546.3	1533.4	1516.2	1488.2	1462.3	1434.4	1404.2	1380.5	1369.7
22.5°	1514.0	1516.2	1505.4	1490.3	1470.9	1438.7	1412.8	1378.3	1348.2	1320.2	1311.6
25°	1460.1	1464.4	1453.7	1438.7	1412.8	1384.8	1352.5	1320.2	1285.7	1257.8	1244.8
27.5°	1397.7	1399.9	1389.1	1374.0	1348.2	1318.0	1285.7	1251.3	1219.0	1188.8	1175.8
30°	1328.8	1320.2	1315.9	1296.5	1268.4	1242.7	1206.0	1178.0	1143.6	1117.7	1102.6
32.5°	1231.9	1236.2	1223.3	1208.2	1186.6	1156.5	1126.4	1094.0	1061.8	1042.4	1031.6
35°	1135.0	1139.3	1132.8	1117.7	1094.0	1068.3	1038.1	1014.3	986.3	962.7	951.9
37.5°	1033.8	1033.8	1029.4	1020.8	1003.6	980.0	949.8	926.1	902.3	883.0	876.6
40°	932.5	928.2	926.1	919.6	904.5	883.0	863.6	844.2	820.5	807.6	798.9
42.5°	833.4	833.4	829.1	822.7	807.6	796.8	777.5	755.9	738.7	725.7	725.7
45°	743.0	745.2	738.7	734.4	725.7	708.5	691.4	676.3	661.2	652.6	648.2
47.5°	663.3	663.3	656.9	652.6	643.9	628.8	613.7	600.9	590.1	583.7	581.5
50°	588.0	588.0	588.0	577.2	566.4	555.6	544.9	529.8	523.3	519.0	516.8
52.5°	523.3	521.1	521.1	512.6	501.8	488.9	478.1	465.2	458.7	454.4	456.6
55°	465.2	465.2	463.0	452.2	441.5	428.5	417.9	407.1	402.8	398.5	400.6
56°	441.5	441.5	439.3	430.7	417.9	407.1	394.1	383.4	376.9	379.0	379.0
57°	424.2	420.0	420.0	409.2	398.5	383.4	372.6	361.8	357.5	355.3	355.3
58°	402.8	400.6	398.5	387.7	376.9	364.0	353.2	342.4	335.9	335.9	333.8
59°	381.2	381.2	376.9	368.3	357.5	344.5	333.8	323.1	316.6	314.5	314.5
60°	361.8	364.0	357.5	348.9	340.2	325.3	312.3	303.7	297.2	295.1	295.1
61°	344.5	344.5	340.2	329.4	318.8	308.0	295.1	284.3	280.0	275.7	275.7
62°	329.4	325.3	323.1	312.3	301.5	288.6	277.8	267.0	260.6	256.3	258.4
63°	310.2	308.0	303.7	295.1	284.3	271.3	258.4	249.8	243.3	236.8	239.0
64°	295.1	292.9	286.4	277.8	267.0	254.1	241.2	232.7	228.3	221.9	219.7
65°	275.7	273.5	271.3	260.6	249.8	236.8	226.2	217.6	211.1	206.8	202.5
66°	258.4	260.6	256.3	247.6	234.7	224.0	208.9	200.3	196.0	189.5	185.2
67°	243.3	243.3	239.0	230.5	217.6	206.8	196.0	185.2	178.7	172.3	170.1
67.5°	234.7	234.7	230.5	219.7	211.1	198.1	187.4	178.7	170.1	165.8	161.5
68°	226.2	226.2	224.0	215.4	204.6	191.7	180.9	170.1	161.5	155.0	152.9
69°	211.1	213.2	208.9	200.3	189.5	176.6	165.8	157.2	148.6	142.1	137.9
70°	198.1	196.0	191.7	183.1	172.3	163.6	152.9	142.1	133.6	125.0	122.8
71°	180.9	180.9	176.6	170.1	159.3	148.6	137.9	129.3	120.6	109.9	107.7
72°	168.0	168.0	163.6	155.0	146.4	135.7	125.0	114.2	107.7	96.9	92.6
72.5°	159.3	161.5	157.2	148.6	140.0	127.1	118.5	109.9	99.1	90.4	86.1
73°	155.0	152.9	150.7	142.1	131.4	122.8	112.0	103.4	92.6	84.0	79.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
77.5°	96.9	96.9	94.8	86.1	77.5	68.9	60.3	51.6	43.1	34.5	30.2
80°	66.7	68.9	64.6	60.3	53.8	45.3	36.7	30.2	21.6	17.3	12.9
82.5°	43.1	43.1	41.0	36.7	32.3	25.9	21.6	15.1	10.8	8.6	6.5
85°	21.6	23.7	21.6	19.4	15.1	12.9	10.8	6.5	4.3	2.2	2.2
87.5°	8.6	8.6	8.6	6.5	6.5	4.3	2.2	2.2	2.2	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°	1589.4	1589.4	1589.4	1589.4	1589.4	1589.4	1589.4	1589.4	1589.4	1589.4
2.5°	1582.9	1582.9	1578.6	1576.4	1574.3	1572.1	1570.0	1567.8	1567.8	1570.0
5°	1570.0	1565.7	1557.0	1554.9	1548.4	1546.3	1542.1	1539.9	1542.1	1539.9
7.5°	1550.6	1542.1	1531.3	1527.0	1518.3	1514.0	1507.6	1507.6	1503.3	1505.4
10°	1524.8	1511.9	1498.9	1490.3	1483.8	1477.4	1473.1	1468.7	1466.6	1466.6
12.5°	1492.5	1477.4	1464.4	1451.5	1440.8	1436.5	1427.9	1427.9	1423.6	1421.4
15°	1455.8	1436.5	1421.4	1408.5	1399.9	1391.2	1384.8	1380.5	1376.1	1376.1
17.5°	1408.5	1391.2	1376.1	1361.0	1348.2	1341.8	1335.3	1328.8	1328.8	1324.5
20°	1356.7	1337.4	1324.5	1309.4	1298.6	1287.8	1279.2	1279.2	1274.9	1277.1
22.5°	1298.6	1274.9	1262.1	1251.3	1240.5	1231.9	1223.3	1223.3	1221.1	1219.0
25°	1234.1	1214.7	1199.6	1186.6	1180.1	1171.5	1169.5	1165.2	1163.0	1163.0
27.5°	1165.2	1150.1	1130.7	1124.2	1115.6	1111.3	1111.3	1109.1	1104.8	1107.0
30°	1091.9	1074.7	1063.9	1059.6	1051.0	1051.0	1048.8	1044.5	1044.5	1046.7
32.5°	1020.8	1003.6	994.9	992.8	984.2	984.2	982.1	984.2	984.2	986.3
35°	943.3	928.2	926.1	919.6	917.4	917.4	917.4	921.7	926.1	919.6
37.5°	870.1	859.3	852.9	850.7	852.9	852.9	855.0	861.5	859.3	857.2
40°	794.8	786.1	781.8	781.8	786.1	790.4	790.4	796.8	798.9	796.8
42.5°	719.3	712.8	712.8	715.0	719.3	721.4	727.9	734.4	736.5	738.7
45°	648.2	648.2	648.2	650.4	652.6	656.9	665.5	672.0	674.1	676.3
47.5°	579.4	577.2	583.7	585.8	592.3	594.4	600.9	609.4	611.6	613.7
50°	514.7	519.0	521.1	527.6	531.9	531.9	540.5	544.9	551.3	551.3
52.5°	454.4	460.9	463.0	469.5	471.7	473.8	478.1	484.6	488.9	488.9
55°	400.6	402.8	407.1	409.2	415.7	417.9	422.1	424.2	430.7	428.5
56°	376.9	381.2	383.4	387.7	392.0	394.1	398.5	400.6	404.9	407.1
57°	355.3	357.5	364.0	366.1	370.4	370.4	372.6	379.0	379.0	381.2
58°	333.8	338.1	340.2	342.4	346.7	348.9	353.2	355.3	357.5	355.3
59°	314.5	316.6	318.8	318.8	323.1	323.1	329.4	333.8	335.9	335.9
60°	295.1	295.1	297.2	299.4	303.7	305.8	305.8	310.2	310.2	310.2
61°	275.7	275.7	277.8	280.0	282.1	282.1	286.4	286.4	288.6	290.8
62°	258.4	256.3	256.3	258.4	258.4	262.7	264.9	267.0	269.2	267.0
63°	239.0	236.8	236.8	236.8	236.8	241.2	241.2	243.3	247.6	245.5
64°	217.6	217.6	217.6	217.6	219.7	219.7	224.0	226.2	228.3	230.5
65°	202.5	198.1	196.0	196.0	198.1	200.3	202.5	204.6	206.8	206.8
66°	185.2	180.9	178.7	178.7	178.7	178.7	183.1	183.1	187.4	187.4
67°	165.8	161.5	159.3	157.2	157.2	157.2	163.6	161.5	161.5	161.5
67.5°	159.3	152.9	150.7	148.6	146.4	150.7	148.6	150.7	150.7	148.6
68°	150.7	146.4	142.1	137.9	137.9	137.9	140.0	142.1	140.0	137.9
69°	133.6	131.4	125.0	120.6	118.5	120.6	118.5	120.6	118.5	120.6
70°	118.5	112.0	105.5	103.4	101.2	101.2	101.2	99.1	101.2	99.1
71°	103.4	96.9	90.4	86.1	84.0	84.0	81.8	84.0	81.8	84.0
72°	88.3	81.8	73.2	68.9	68.9	68.9	68.9	66.7	68.9	66.7
72.5°	81.8	73.2	66.7	62.4	60.3	60.3	60.3	60.3	58.1	60.3
73°	75.4	66.7	58.1	55.9	55.9	55.9	53.8	51.6	53.8	53.8



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CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
77.5°	25.9	19.4	17.3	17.3	17.3	17.3	17.3	17.3	15.1	15.1
80°	10.8	8.6	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
82.5°	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
85°	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
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°	140.0	140.0	135.7	129.3	118.5	107.7	99.1	90.4	79.7	68.9	64.6
75°	129.3	127.1	122.8	116.3	107.7	96.9	88.3	77.5	68.9	58.1	53.8





74°	62.4	51.6	47.3	43.1	43.1	43.1	41.0	41.0	41.0	43.1
75°	49.5	41.0	36.7	32.3	34.5	32.3	34.5	32.3	32.3	32.3



(END OF REPORT)