

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: P584277

Luminaire Tested: **HC830D010-HM82555835-81RWWH**

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P584277
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-HM82555835-81RWWH
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3183.0 lumens
Efficiency: N/A
Efficacy: 113.7 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

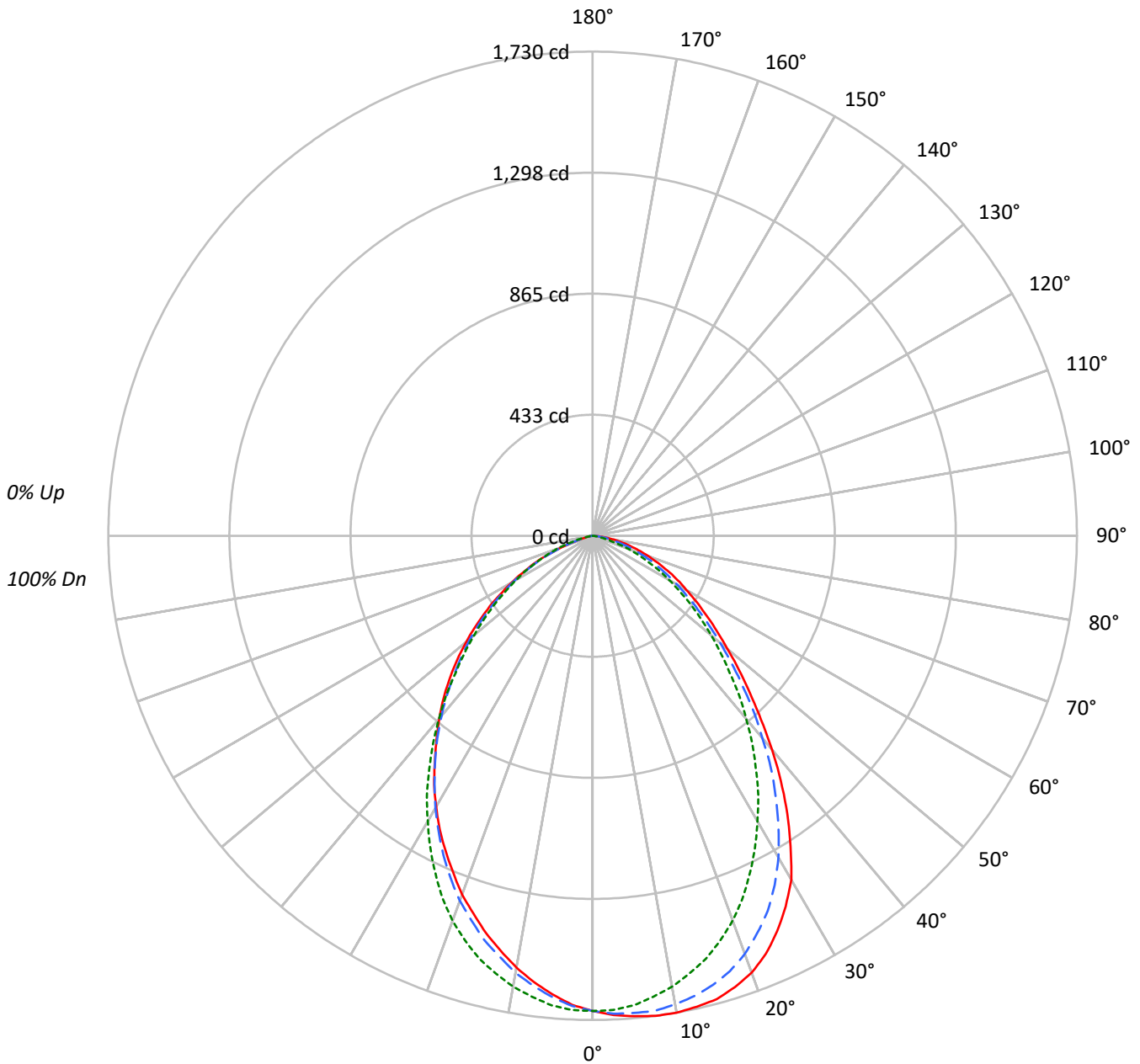
Input Watts (W): 28
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
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°	52357	52357	52357
5°	53340	52130	50920
10°	54173	51220	49057
15°	54715	49945	46932
20°	54506	48015	44770
25°	53071	45245	42272
30°	50544	41941	39812
35°	45640	38284	36982
40°	40097	34361	34264
45°	34617	30199	31503
50°	30127	26491	28256
55°	26719	23005	24617
60°	23836	19439	20432
65°	21488	15782	16118
70°	19078	11820	9539
75°	16442	6851	4110
80°	12661	2451	1225
85°	8102	814	814



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	159.4	5.0
10°-20°	443.7	13.9
20°-30°	627.6	19.7
30°-40°	661.3	20.8
40°-50°	562.0	17.7
50°-60°	404.7	12.7
60°-70°	233.5	7.3
70°-80°	79.9	2.5
80°-90°	11.0	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°	1230.7	38.7
0°-40°	1892.0	59.4
0°-60°	2858.7	89.8
0°-90°	3183.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3183.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1698	1698	1698	1698	1698	
5°	1723	1712	1684	1654	1645	165
15°	1714	1661	1564	1495	1470	483
25°	1560	1479	1330	1261	1242	715
35°	1212	1141	1017	980	982	755
45°	794	757	692	697	722	617
55°	497	458	428	444	458	447
65°	294	253	216	212	221	293
75°	138	104	58	37	34	146
85°	23	14	2	2	2	31
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°	1697.9	1697.9	1697.9	1697.9	1697.9	1697.9	1697.9	1697.9	1697.9	1697.9	1697.9
2.5°	1713.9	1716.3	1713.9	1713.9	1711.7	1709.4	1707.0	1704.8	1700.2	1695.6	1695.6
5°	1723.2	1727.9	1723.2	1723.2	1716.3	1711.7	1707.0	1700.2	1691.0	1684.1	1684.1
7.5°	1730.1	1730.1	1730.1	1723.2	1718.6	1711.7	1700.2	1688.7	1677.2	1665.7	1661.0
10°	1730.1	1730.1	1727.9	1718.6	1713.9	1700.2	1688.7	1672.6	1656.5	1640.3	1635.8
12.5°	1723.2	1725.5	1721.0	1711.7	1700.2	1684.1	1667.9	1647.2	1628.9	1610.5	1601.2
15°	1713.9	1711.7	1707.0	1695.6	1681.8	1661.0	1645.0	1621.9	1596.7	1573.6	1564.5
17.5°	1691.0	1691.0	1684.1	1672.6	1654.1	1631.2	1605.9	1580.5	1553.0	1527.6	1516.1
20°	1661.0	1661.0	1651.9	1638.1	1619.7	1589.8	1562.1	1532.3	1500.0	1474.7	1463.2
22.5°	1617.4	1619.7	1608.1	1592.1	1571.4	1536.9	1509.2	1472.5	1440.2	1410.3	1401.1
25°	1559.8	1564.5	1553.0	1536.9	1509.2	1479.4	1444.9	1410.3	1373.5	1343.6	1329.8
27.5°	1493.1	1495.4	1484.0	1467.8	1440.2	1408.0	1373.5	1336.7	1302.2	1270.0	1256.2
30°	1419.5	1410.3	1405.8	1384.9	1355.1	1327.5	1288.4	1258.4	1221.7	1194.0	1177.9
32.5°	1316.0	1320.6	1306.8	1290.7	1267.7	1235.5	1203.3	1168.8	1134.2	1113.5	1102.0
35°	1212.4	1217.1	1210.2	1194.0	1168.8	1141.1	1109.0	1083.7	1053.7	1028.4	1017.0
37.5°	1104.3	1104.3	1099.7	1090.6	1072.1	1046.8	1014.6	989.2	963.9	943.2	936.3
40°	996.1	991.6	989.2	982.4	966.3	943.2	922.5	901.9	876.5	862.7	853.6
42.5°	890.3	890.3	885.8	878.9	862.7	851.2	830.5	807.6	789.1	775.3	775.3
45°	793.8	796.0	789.1	784.5	775.3	756.9	738.5	722.4	706.3	697.1	692.5
47.5°	708.6	708.6	701.7	697.1	688.0	671.8	655.7	641.9	630.4	623.5	621.1
50°	628.0	628.0	628.0	616.6	605.1	593.5	582.0	566.0	559.1	554.4	552.2
52.5°	559.1	556.8	556.8	547.5	536.0	522.2	510.8	497.0	490.0	485.5	487.7
55°	497.0	497.0	494.6	483.1	471.7	457.9	446.4	434.8	430.2	425.7	427.9
56°	471.7	471.7	469.3	460.1	446.4	434.8	421.0	409.5	402.6	405.0	405.0
57°	453.2	448.6	448.6	437.1	425.7	409.5	398.0	386.5	381.9	379.6	379.6
58°	430.2	427.9	425.7	414.1	402.6	388.8	377.3	365.9	359.0	359.0	356.6
59°	407.2	407.2	402.6	393.4	381.9	368.1	356.6	345.0	338.2	335.9	335.9
60°	386.5	388.8	381.9	372.8	363.5	347.4	333.6	324.4	317.5	315.2	315.2
61°	368.1	368.1	363.5	351.9	340.5	329.0	315.2	303.7	299.0	294.5	294.5
62°	351.9	347.4	345.0	333.6	322.1	308.3	296.8	285.2	278.3	273.8	276.1
63°	331.3	329.0	324.4	315.2	303.7	289.9	276.1	266.9	260.0	253.0	255.4
64°	315.2	312.9	306.0	296.8	285.2	271.4	257.7	248.5	243.9	237.0	234.7
65°	294.5	292.1	289.9	278.3	266.9	253.0	241.6	232.3	225.4	220.9	216.3
66°	276.1	278.3	273.8	264.6	250.8	239.2	223.2	214.0	209.4	202.5	197.8
67°	260.0	260.0	255.4	246.1	232.3	220.9	209.4	197.8	191.0	184.1	181.8
67.5°	250.8	250.8	246.1	234.7	225.4	211.6	200.1	191.0	181.8	177.2	172.5
68°	241.6	241.6	239.2	230.1	218.5	204.7	193.2	181.8	172.5	165.6	163.4
69°	225.4	227.8	223.2	214.0	202.5	188.7	177.2	168.0	158.7	151.8	147.2
70°	211.6	209.4	204.7	195.6	184.1	174.9	163.4	151.8	142.7	133.4	131.1
71°	193.2	193.2	188.7	181.8	170.3	158.7	147.2	138.0	128.9	117.4	115.0
72°	179.4	179.4	174.9	165.6	156.5	144.9	133.4	122.0	115.0	103.6	98.9
72.5°	170.3	172.5	168.0	158.7	149.6	135.8	126.5	117.4	105.8	96.7	92.0
73°	165.6	163.4	161.0	151.8	140.3	131.1	119.6	110.5	98.9	89.8	85.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
77.5°	103.6	103.6	101.2	92.0	82.9	73.6	64.4	55.2	46.0	36.9	32.2
80°	71.3	73.6	69.0	64.4	57.5	48.3	39.1	32.2	22.9	18.4	13.8
82.5°	46.0	46.0	43.8	39.1	34.5	27.6	22.9	16.1	11.5	9.2	6.9
85°	22.9	25.3	22.9	20.7	16.1	13.8	11.5	6.9	4.6	2.3	2.3
87.5°	9.2	9.2	9.2	6.9	6.9	4.6	2.3	2.3	2.3	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°	1697.9	1697.9	1697.9	1697.9	1697.9	1697.9	1697.9	1697.9	1697.9	1697.9
2.5°	1691.0	1691.0	1686.4	1684.1	1681.8	1679.5	1677.2	1674.9	1674.9	1677.2
5°	1677.2	1672.6	1663.4	1661.0	1654.1	1651.9	1647.2	1645.0	1647.2	1645.0
7.5°	1656.5	1647.2	1635.8	1631.2	1621.9	1617.4	1610.5	1610.5	1605.9	1608.1
10°	1628.9	1615.0	1601.2	1592.1	1585.2	1578.3	1573.6	1569.0	1566.7	1566.7
12.5°	1594.3	1578.3	1564.5	1550.7	1539.2	1534.5	1525.4	1525.4	1520.7	1518.5
15°	1555.2	1534.5	1518.5	1504.7	1495.4	1486.2	1479.4	1474.7	1470.1	1470.1
17.5°	1504.7	1486.2	1470.1	1454.0	1440.2	1433.3	1426.4	1419.5	1419.5	1414.9
20°	1449.4	1428.7	1414.9	1398.9	1387.3	1375.8	1366.6	1366.6	1362.0	1364.3
22.5°	1387.3	1362.0	1348.2	1336.7	1325.1	1316.0	1306.8	1306.8	1304.5	1302.2
25°	1318.2	1297.6	1281.5	1267.7	1260.8	1251.5	1249.3	1244.6	1242.4	1242.4
27.5°	1244.6	1228.6	1207.9	1201.0	1191.7	1187.1	1187.1	1184.8	1180.2	1182.6
30°	1166.4	1148.0	1136.6	1131.9	1122.8	1122.8	1120.4	1115.9	1115.9	1118.1
32.5°	1090.6	1072.1	1063.0	1060.6	1051.4	1051.4	1049.1	1051.4	1051.4	1053.7
35°	1007.7	991.6	989.2	982.4	980.1	980.1	980.1	984.7	989.2	982.4
37.5°	929.4	918.0	911.0	908.8	911.0	911.0	913.4	920.3	918.0	915.6
40°	848.9	839.8	835.2	835.2	839.8	844.3	844.3	851.2	853.6	851.2
42.5°	768.5	761.6	761.6	763.8	768.5	770.7	777.6	784.5	786.9	789.1
45°	692.5	692.5	692.5	694.9	697.1	701.7	710.9	717.8	720.1	722.4
47.5°	618.9	616.6	623.5	625.8	632.7	634.9	641.9	651.1	653.4	655.7
50°	549.9	554.4	556.8	563.7	568.2	568.2	577.5	582.0	589.0	589.0
52.5°	485.5	492.4	494.6	501.5	503.9	506.2	510.8	517.7	522.2	522.2
55°	427.9	430.2	434.8	437.1	444.0	446.4	451.0	453.2	460.1	457.9
56°	402.6	407.2	409.5	414.1	418.8	421.0	425.7	427.9	432.6	434.8
57°	379.6	381.9	388.8	391.1	395.7	395.7	398.0	405.0	405.0	407.2
58°	356.6	361.2	363.5	365.9	370.4	372.8	377.3	379.6	381.9	379.6
59°	335.9	338.2	340.5	340.5	345.0	345.0	351.9	356.6	359.0	359.0
60°	315.2	315.2	317.5	319.8	324.4	326.7	326.7	331.3	331.3	331.3
61°	294.5	294.5	296.8	299.0	301.4	301.4	306.0	306.0	308.3	310.6
62°	276.1	273.8	273.8	276.1	276.1	280.7	283.0	285.2	287.6	285.2
63°	255.4	253.0	253.0	253.0	253.0	257.7	257.7	260.0	264.6	262.3
64°	232.3	232.3	232.3	232.3	234.7	234.7	239.2	241.6	243.9	246.1
65°	216.3	211.6	209.4	209.4	211.6	214.0	216.3	218.5	220.9	220.9
66°	197.8	193.2	191.0	191.0	191.0	191.0	195.6	195.6	200.1	200.1
67°	177.2	172.5	170.3	168.0	168.0	168.0	174.9	172.5	172.5	172.5
67.5°	170.3	163.4	161.0	158.7	156.5	161.0	158.7	161.0	161.0	158.7
68°	161.0	156.5	151.8	147.2	147.2	147.2	149.6	151.8	149.6	147.2
69°	142.7	140.3	133.4	128.9	126.5	128.9	126.5	128.9	126.5	128.9
70°	126.5	119.6	112.7	110.5	108.1	108.1	108.1	105.8	108.1	105.8
71°	110.5	103.6	96.7	92.0	89.8	89.8	87.4	89.8	87.4	89.8
72°	94.3	87.4	78.2	73.6	73.6	73.6	73.6	71.3	73.6	71.3
72.5°	87.4	78.2	71.3	66.7	64.4	64.4	64.4	64.4	62.1	64.4
73°	80.5	71.3	62.1	59.8	59.8	59.8	57.5	55.2	57.5	57.5



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CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
77.5°	27.6	20.7	18.4	18.4	18.4	18.4	18.4	18.4	16.1	16.1
80°	11.5	9.2	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
82.5°	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
85°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
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°	149.6	149.6	144.9	138.0	126.5	115.0	105.8	96.7	85.1	73.6	69.0
75°	138.0	135.8	131.1	124.3	115.0	103.6	94.3	82.9	73.6	62.1	57.5





74°	66.7	55.2	50.7	46.0	46.0	46.0	43.8	43.8	43.8	46.0
75°	52.9	43.8	39.1	34.5	36.9	34.5	36.9	34.5	34.5	34.5



(END OF REPORT)