

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: P584328

Luminaire Tested: **HC830D010-HM82555930-81RWWH**

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P584328
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-HM82555930-81RWWH
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2952.4 lumens
Efficiency: N/A
Efficacy: 105.4 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

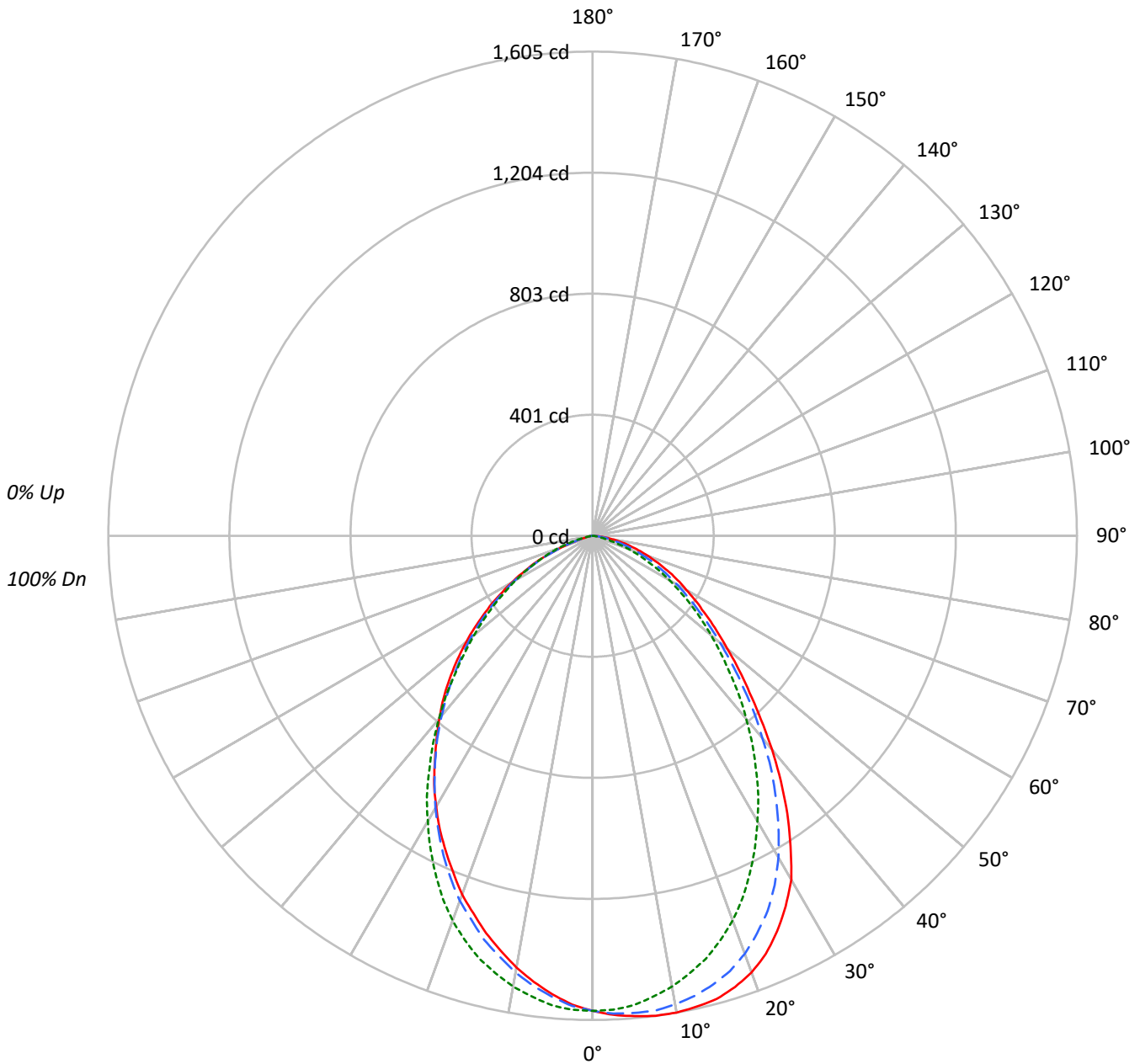
Input Watts (W): 28
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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
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°	48564	48564	48564
5°	49477	48353	47230
10°	50250	47510	45506
15°	50753	46328	43535
20°	50559	44537	41528
25°	49229	41969	39209
30°	46883	38904	36931
35°	42338	35506	34301
40°	37195	31873	31785
45°	32105	28010	29222
50°	27949	24572	26208
55°	24784	21338	22832
60°	22110	18033	18958
65°	19927	14637	14951
70°	17698	10963	8854
75°	15262	6362	3813
80°	11738	2273	1137
85°	7536	743	743



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	147.8	5.0
10°-20°	411.6	13.9
20°-30°	582.1	19.7
30°-40°	613.4	20.8
40°-50°	521.3	17.7
50°-60°	375.4	12.7
60°-70°	216.5	7.3
70°-80°	74.1	2.5
80°-90°	10.2	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°	1141.5	38.7
0°-40°	1754.9	59.4
0°-60°	2651.6	89.8
0°-90°	2952.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2952.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1575	1575	1575	1575	1575	
5°	1598	1588	1562	1534	1526	153
15°	1590	1541	1451	1387	1364	448
25°	1447	1372	1234	1169	1152	664
35°	1125	1058	943	909	911	700
45°	736	702	642	647	670	572
55°	461	425	397	412	425	415
65°	273	235	201	196	205	272
75°	128	96	53	34	32	135
85°	21	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°	1574.9	1574.9	1574.9	1574.9	1574.9	1574.9	1574.9	1574.9	1574.9	1574.9	1574.9
2.5°	1589.8	1592.0	1589.8	1589.8	1587.7	1585.5	1583.4	1581.3	1577.1	1572.8	1572.8
5°	1598.4	1602.7	1598.4	1598.4	1592.0	1587.7	1583.4	1577.1	1568.5	1562.1	1562.1
7.5°	1604.8	1604.8	1604.8	1598.4	1594.1	1587.7	1577.1	1566.4	1555.7	1545.0	1540.7
10°	1604.8	1604.8	1602.7	1594.1	1589.8	1577.1	1566.4	1551.4	1536.5	1521.6	1517.3
12.5°	1598.4	1600.5	1596.2	1587.7	1577.1	1562.1	1547.1	1528.0	1510.9	1493.9	1485.3
15°	1589.8	1587.7	1583.4	1572.8	1560.0	1540.7	1525.8	1504.4	1481.0	1459.6	1451.2
17.5°	1568.5	1568.5	1562.1	1551.4	1534.4	1513.0	1489.6	1466.0	1440.5	1416.9	1406.3
20°	1540.7	1540.7	1532.3	1519.4	1502.3	1474.6	1449.0	1421.2	1391.4	1367.9	1357.2
22.5°	1500.2	1502.3	1491.7	1476.7	1457.5	1425.5	1399.9	1365.8	1335.8	1308.1	1299.6
25°	1446.9	1451.2	1440.5	1425.5	1399.9	1372.2	1340.1	1308.1	1274.0	1246.3	1233.5
27.5°	1384.9	1387.1	1376.4	1361.5	1335.8	1306.0	1274.0	1239.9	1207.9	1177.9	1165.2
30°	1316.7	1308.1	1303.9	1284.7	1256.9	1231.3	1195.1	1167.4	1133.1	1107.6	1092.6
32.5°	1220.6	1224.9	1212.1	1197.2	1175.8	1146.0	1116.1	1084.1	1052.0	1032.9	1022.2
35°	1124.7	1128.8	1122.5	1107.6	1084.1	1058.4	1028.6	1005.1	977.4	953.9	943.2
37.5°	1024.3	1024.3	1020.0	1011.5	994.5	970.9	941.1	917.7	894.1	875.0	868.6
40°	924.0	919.8	917.7	911.2	896.3	875.0	855.7	836.6	813.0	800.2	791.8
42.5°	825.9	825.9	821.6	815.2	800.2	789.6	770.4	749.1	731.9	719.1	719.1
45°	736.2	738.4	731.9	727.7	719.1	702.1	685.0	670.1	655.1	646.6	642.3
47.5°	657.3	657.3	650.9	646.6	638.0	623.2	608.2	595.3	584.8	578.3	576.2
50°	582.6	582.6	582.6	571.9	561.2	550.6	539.9	524.9	518.5	514.2	512.2
52.5°	518.5	516.4	516.4	507.9	497.2	484.4	473.7	461.0	454.6	450.3	452.4
55°	461.0	461.0	458.8	448.1	437.4	424.7	414.0	403.3	399.0	394.7	396.9
56°	437.4	437.4	435.3	426.9	414.0	403.3	390.5	379.9	373.5	375.6	375.6
57°	420.4	416.2	416.2	405.4	394.7	379.9	369.2	358.5	354.2	352.1	352.1
58°	399.0	396.9	394.7	384.2	373.5	360.6	349.9	339.3	332.9	332.9	330.8
59°	377.7	377.7	373.5	364.9	354.2	341.5	330.8	320.1	313.7	311.5	311.5
60°	358.5	360.6	354.2	345.8	337.2	322.2	309.4	300.9	294.5	292.4	292.4
61°	341.5	341.5	337.2	326.5	315.8	305.2	292.4	281.7	277.4	273.1	273.1
62°	326.5	322.2	320.1	309.4	298.8	286.0	275.3	264.7	258.3	254.0	256.1
63°	307.4	305.2	300.9	292.4	281.7	268.8	256.1	247.5	241.1	234.7	236.8
64°	292.4	290.2	283.8	275.3	264.7	251.8	239.0	230.4	226.1	219.8	217.7
65°	273.1	271.0	268.8	258.3	247.5	234.7	224.1	215.6	209.1	204.9	200.6
66°	256.1	258.3	254.0	245.4	232.6	222.0	207.0	198.4	194.2	187.7	183.6
67°	241.1	241.1	236.8	228.3	215.6	204.9	194.2	183.6	177.2	170.7	168.6
67.5°	232.6	232.6	228.3	217.7	209.1	196.3	185.6	177.2	168.6	164.3	160.0
68°	224.1	224.1	222.0	213.4	202.7	189.9	179.3	168.6	160.0	153.6	151.5
69°	209.1	211.3	207.0	198.4	187.7	175.0	164.3	155.8	147.2	140.9	136.6
70°	196.3	194.2	189.9	181.4	170.7	162.2	151.5	140.9	132.3	123.8	121.6
71°	179.3	179.3	175.0	168.6	157.9	147.2	136.6	128.1	119.5	108.8	106.7
72°	166.5	166.5	162.2	153.6	145.1	134.5	123.8	113.1	106.7	96.1	91.8
72.5°	157.9	160.0	155.8	147.2	138.8	125.9	117.4	108.8	98.2	89.7	85.4
73°	153.6	151.5	149.3	140.9	130.2	121.6	110.9	102.5	91.8	83.2	78.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
77.5°	96.1	96.1	93.9	85.4	76.8	68.2	59.8	51.2	42.7	34.1	29.8
80°	66.1	68.2	64.0	59.8	53.4	44.8	36.3	29.8	21.3	17.1	12.8
82.5°	42.7	42.7	40.5	36.3	32.0	25.6	21.3	15.0	10.7	8.6	6.4
85°	21.3	23.4	21.3	19.3	15.0	12.8	10.7	6.4	4.3	2.1	2.1
87.5°	8.6	8.6	8.6	6.4	6.4	4.3	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°	1574.9	1574.9	1574.9	1574.9	1574.9	1574.9	1574.9	1574.9	1574.9	1574.9
2.5°	1568.5	1568.5	1564.2	1562.1	1560.0	1557.8	1555.7	1553.5	1553.5	1555.7
5°	1555.7	1551.4	1542.8	1540.7	1534.4	1532.3	1528.0	1525.8	1528.0	1525.8
7.5°	1536.5	1528.0	1517.3	1513.0	1504.4	1500.2	1493.9	1493.9	1489.6	1491.7
10°	1510.9	1498.0	1485.3	1476.7	1470.3	1463.9	1459.6	1455.3	1453.3	1453.3
12.5°	1478.9	1463.9	1451.2	1438.3	1427.6	1423.4	1414.8	1414.8	1410.6	1408.5
15°	1442.6	1423.4	1408.5	1395.6	1387.1	1378.5	1372.2	1367.9	1363.7	1363.7
17.5°	1395.6	1378.5	1363.7	1348.7	1335.8	1329.5	1323.1	1316.7	1316.7	1312.4
20°	1344.4	1325.3	1312.4	1297.4	1286.9	1276.2	1267.6	1267.6	1263.3	1265.5
22.5°	1286.9	1263.3	1250.5	1239.9	1229.2	1220.6	1212.1	1212.1	1209.9	1207.9
25°	1222.8	1203.6	1188.6	1175.8	1169.4	1160.9	1158.8	1154.5	1152.4	1152.4
27.5°	1154.5	1139.5	1120.4	1114.0	1105.4	1101.1	1101.1	1099.0	1094.7	1096.9
30°	1082.0	1064.9	1054.2	1049.9	1041.4	1041.4	1039.3	1035.0	1035.0	1037.2
32.5°	1011.5	994.5	985.9	983.8	975.2	975.2	973.1	975.2	975.2	977.4
35°	934.7	919.8	917.7	911.2	909.1	909.1	909.1	913.4	917.7	911.2
37.5°	862.1	851.4	845.0	842.9	845.0	845.0	847.2	853.6	851.4	849.3
40°	787.5	778.9	774.6	774.6	778.9	783.2	783.2	789.6	791.8	789.6
42.5°	712.8	706.4	706.4	708.5	712.8	714.9	721.2	727.7	729.8	731.9
45°	642.3	642.3	642.3	644.4	646.6	650.9	659.4	665.8	668.0	670.1
47.5°	574.0	571.9	578.3	580.5	586.9	589.0	595.3	603.9	606.0	608.2
50°	510.1	514.2	516.4	522.8	527.1	527.1	535.6	539.9	546.3	546.3
52.5°	450.3	456.7	458.8	465.3	467.4	469.5	473.7	480.1	484.4	484.4
55°	396.9	399.0	403.3	405.4	411.9	414.0	418.3	420.4	426.9	424.7
56°	373.5	377.7	379.9	384.2	388.4	390.5	394.7	396.9	401.2	403.3
57°	352.1	354.2	360.6	362.8	367.0	367.0	369.2	375.6	375.6	377.7
58°	330.8	335.1	337.2	339.3	343.6	345.8	349.9	352.1	354.2	352.1
59°	311.5	313.7	315.8	315.8	320.1	320.1	326.5	330.8	332.9	332.9
60°	292.4	292.4	294.5	296.7	300.9	303.1	303.1	307.4	307.4	307.4
61°	273.1	273.1	275.3	277.4	279.5	279.5	283.8	283.8	286.0	288.1
62°	256.1	254.0	254.0	256.1	256.1	260.4	262.5	264.7	266.7	264.7
63°	236.8	234.7	234.7	234.7	234.7	239.0	239.0	241.1	245.4	243.3
64°	215.6	215.6	215.6	215.6	217.7	217.7	222.0	224.1	226.1	228.3
65°	200.6	196.3	194.2	194.2	196.3	198.4	200.6	202.7	204.9	204.9
66°	183.6	179.3	177.2	177.2	177.2	177.2	181.4	181.4	185.6	185.6
67°	164.3	160.0	157.9	155.8	155.8	155.8	162.2	160.0	160.0	160.0
67.5°	157.9	151.5	149.3	147.2	145.1	149.3	147.2	149.3	149.3	147.2
68°	149.3	145.1	140.9	136.6	136.6	136.6	138.8	140.9	138.8	136.6
69°	132.3	130.2	123.8	119.5	117.4	119.5	117.4	119.5	117.4	119.5
70°	117.4	110.9	104.5	102.5	100.4	100.4	100.4	98.2	100.4	98.2
71°	102.5	96.1	89.7	85.4	83.2	83.2	81.1	83.2	81.1	83.2
72°	87.5	81.1	72.5	68.2	68.2	68.2	68.2	66.1	68.2	66.1
72.5°	81.1	72.5	66.1	61.8	59.8	59.8	59.8	59.8	57.7	59.8
73°	74.7	66.1	57.7	55.5	55.5	55.5	53.4	51.2	53.4	53.4



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CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
77.5°	25.6	19.3	17.1	17.1	17.1	17.1	17.1	17.1	15.0	15.0
80°	10.7	8.6	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4
82.5°	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
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°	138.8	138.8	134.5	128.1	117.4	106.7	98.2	89.7	78.9	68.2	64.0
75°	128.1	125.9	121.6	115.2	106.7	96.1	87.5	76.8	68.2	57.7	53.4





74°	61.8	51.2	47.0	42.7	42.7	42.7	40.5	40.5	40.5	42.7
75°	49.1	40.5	36.3	32.0	34.1	32.0	34.1	32.0	32.0	32.0



(END OF REPORT)