

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: P584974

Luminaire Tested: **HC855D010-HM82555840-81RWWH**

Issue Date: 10/21/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P584974  
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: HC855D010-HM82555840-81RWWH  
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, HAZE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5633.9 lumens  
Efficiency: N/A  
Efficacy: 108.3 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

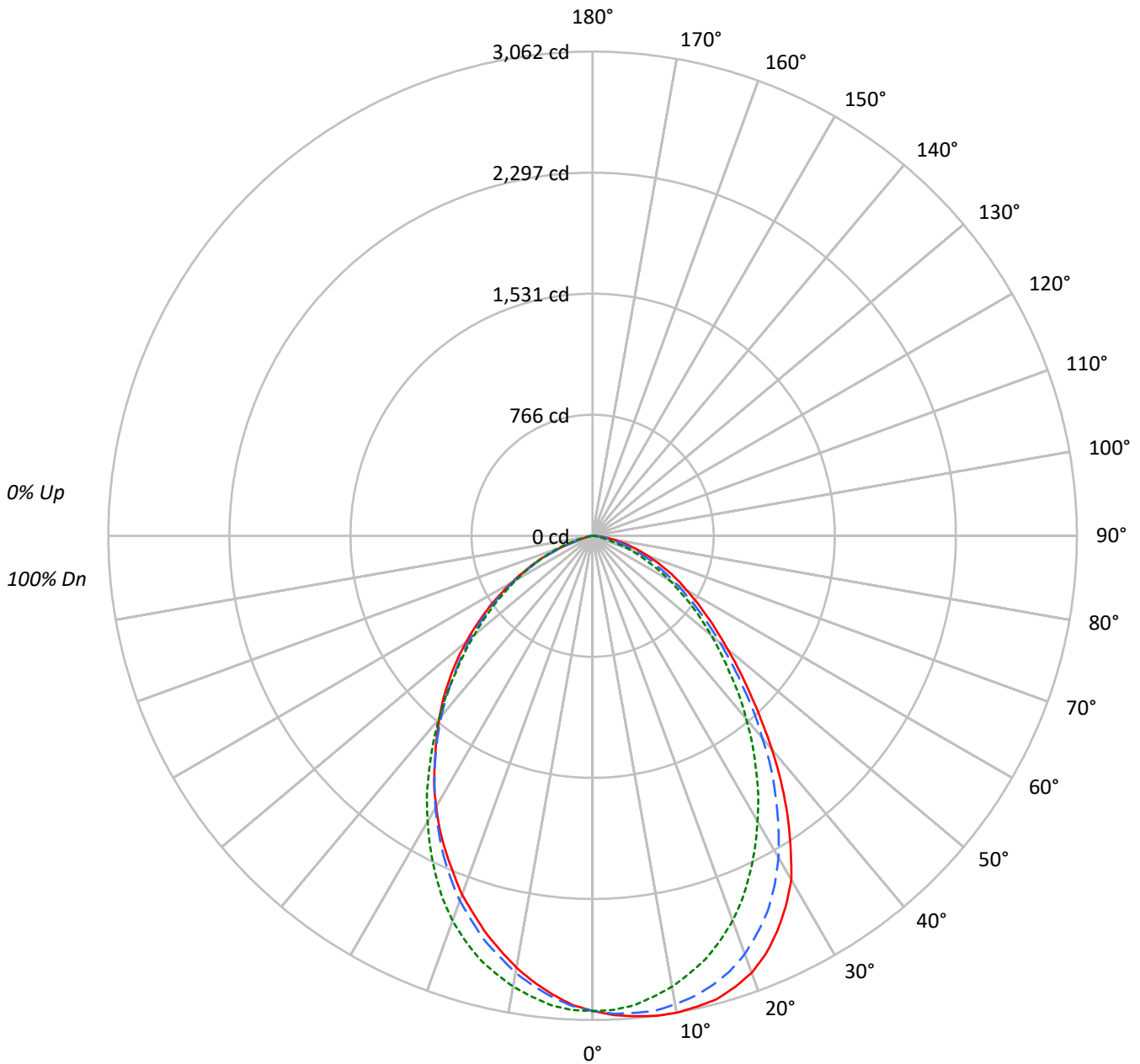
Input Watts (W): 52  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P584974

CATALOG NUMBER: HC855D010-HM82555840-81RWWH

### Luminous Intensity Polar Plot





TEST NUMBER: P584974

CATALOG NUMBER: HC855D010-HM82555840-81RWWH

**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°	92669	92669	92669
5°	94410	92271	90126
10°	95884	90658	86834
15°	96848	88401	83070
20°	96480	84988	79242
25°	93937	80083	74816
30°	89462	74240	70466
35°	80784	67752	65456
40°	70980	60812	60651
45°	61266	53452	55763
50°	53327	46884	50012
55°	47289	40724	43563
60°	42190	34407	36165
65°	38029	27931	28529
70°	33783	20926	16887
75°	29118	12129	7280
80°	22411	4333	2166
85°	14400	1451	1451



TEST NUMBER: P584974

CATALOG NUMBER: HC855D010-HM82555840-81RWWH

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	282.1	5.0
10°-20°	785.4	13.9
20°-30°	1110.8	19.7
30°-40°	1170.5	20.8
40°-50°	994.8	17.7
50°-60°	716.3	12.7
60°-70°	413.2	7.3
70°-80°	141.4	2.5
80°-90°	19.4	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°	2178.3	38.7
0°-40°	3348.7	59.4
0°-60°	5059.8	89.8
0°-90°	5633.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5633.9	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	3005	3005	3005	3005	3005	
5°	3050	3030	2981	2928	2912	292
15°	3034	2940	2769	2647	2602	854
25°	2761	2618	2354	2232	2199	1266
35°	2146	2020	1800	1735	1739	1336
45°	1405	1340	1226	1234	1279	1091
55°	880	810	758	786	810	791
65°	521	448	383	375	391	518
75°	244	183	102	65	61	258
85°	41	24	4	4	4	55
90°	0	0	0	0	0	



TEST NUMBER: P584974

CATALOG NUMBER: HC855D010-HM82555840-81RWWH

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	3005.2	3005.2	3005.2	3005.2	3005.2	3005.2	3005.2	3005.2	3005.2	3005.2	3005.2
2.5°	3033.7	3037.8	3033.7	3033.7	3029.6	3025.6	3021.5	3017.4	3009.3	3001.1	3001.1
5°	3050.0	3058.2	3050.0	3050.0	3037.8	3029.6	3021.5	3009.3	2993.1	2980.9	2980.9
7.5°	3062.2	3062.2	3062.2	3050.0	3041.9	3029.6	3009.3	2989.0	2968.6	2948.3	2940.1
10°	3062.2	3062.2	3058.2	3041.9	3033.7	3009.3	2989.0	2960.5	2932.0	2903.4	2895.3
12.5°	3050.0	3054.1	3045.9	3029.6	3009.3	2980.9	2952.3	2915.7	2883.1	2850.5	2834.2
15°	3033.7	3029.6	3021.5	3001.1	2976.8	2940.1	2911.6	2870.8	2826.0	2785.4	2769.1
17.5°	2993.1	2993.1	2980.9	2960.5	2927.9	2887.1	2842.3	2797.6	2748.7	2703.9	2683.5
20°	2940.1	2940.1	2923.8	2899.4	2866.8	2813.9	2765.0	2712.0	2655.0	2610.3	2589.9
22.5°	2862.7	2866.8	2846.4	2818.0	2781.3	2720.2	2671.3	2606.2	2549.2	2496.2	2480.0
25°	2760.9	2769.1	2748.7	2720.2	2671.3	2618.4	2557.3	2496.2	2431.1	2378.1	2353.7
27.5°	2642.9	2646.8	2626.6	2598.0	2549.2	2492.1	2431.1	2365.9	2304.9	2247.8	2223.4
30°	2512.5	2496.2	2488.0	2451.5	2398.5	2349.6	2280.4	2227.5	2162.3	2113.5	2085.0
32.5°	2329.2	2337.4	2312.9	2284.5	2243.8	2186.7	2129.8	2068.7	2007.5	1971.0	1950.6
35°	2146.0	2154.1	2141.9	2113.5	2068.7	2019.8	1962.7	1918.0	1865.0	1820.2	1799.8
37.5°	1954.7	1954.7	1946.5	1930.2	1897.6	1852.8	1795.9	1751.0	1706.2	1669.6	1657.3
40°	1763.3	1755.1	1751.0	1738.8	1710.3	1669.6	1632.9	1596.3	1551.5	1527.0	1510.7
42.5°	1575.9	1575.9	1567.8	1555.6	1527.0	1506.7	1470.0	1429.4	1396.8	1372.3	1372.3
45°	1404.9	1409.0	1396.8	1388.6	1372.3	1339.7	1307.1	1278.7	1250.2	1233.9	1225.7
47.5°	1254.3	1254.3	1242.0	1233.9	1217.6	1189.1	1160.5	1136.1	1115.7	1103.6	1099.5
50°	1111.6	1111.6	1111.6	1091.4	1071.0	1050.6	1030.3	1001.7	989.5	981.4	977.3
52.5°	989.5	985.4	985.4	969.1	948.9	924.4	904.0	879.6	867.4	859.2	863.3
55°	879.6	879.6	875.5	855.2	834.8	810.3	790.0	769.7	761.4	753.4	757.5
56°	834.8	834.8	830.7	814.4	790.0	769.7	745.2	724.9	712.6	716.7	716.7
57°	802.2	794.0	794.0	773.8	753.4	724.9	704.5	684.1	676.0	671.9	671.9
58°	761.4	757.5	753.4	733.0	712.6	688.2	667.8	647.4	635.2	635.2	631.2
59°	720.8	720.8	712.6	696.3	676.0	651.5	631.2	610.8	598.7	594.6	594.6
60°	684.1	688.2	676.0	659.7	643.4	614.9	590.5	574.2	562.0	557.9	557.9
61°	651.5	651.5	643.4	623.0	602.6	582.4	557.9	537.5	529.4	521.2	521.2
62°	623.0	614.9	610.8	590.5	570.1	545.7	525.3	504.9	492.7	484.6	488.6
63°	586.4	582.4	574.2	557.9	537.5	513.1	488.6	472.3	460.1	447.9	452.0
64°	557.9	553.8	541.6	525.3	504.9	480.5	456.0	439.7	431.6	419.5	415.4
65°	521.2	517.2	513.1	492.7	472.3	447.9	427.5	411.3	399.1	391.0	382.8
66°	488.6	492.7	484.6	468.3	443.8	423.6	395.0	378.7	370.6	358.4	350.2
67°	460.1	460.1	452.0	435.7	411.3	391.0	370.6	350.2	338.0	325.8	321.7
67.5°	443.8	443.8	435.7	415.4	399.1	374.7	354.3	338.0	321.7	313.5	305.4
68°	427.5	427.5	423.6	407.3	386.9	362.4	342.1	321.7	305.4	293.2	289.1
69°	399.1	403.2	395.0	378.7	358.4	333.9	313.5	297.2	280.9	268.7	260.7
70°	374.7	370.6	362.4	346.1	325.8	309.5	289.1	268.7	252.4	236.2	232.1
71°	342.1	342.1	333.9	321.7	301.3	280.9	260.7	244.4	228.1	207.7	203.6
72°	317.6	317.6	309.5	293.2	276.9	256.6	236.2	215.8	203.6	183.3	175.1
72.5°	301.3	305.4	297.2	280.9	264.6	240.3	224.0	207.7	187.3	171.0	162.9
73°	293.2	289.1	285.0	268.7	248.3	232.1	211.8	195.5	175.1	158.8	150.7



TEST NUMBER: P584974

CATALOG NUMBER: HC855D010-HM82555840-81RWWH

**CANDELA DISTRIBUTION (continued):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
77.5°	183.3	183.3	179.2	162.9	146.6	130.3	114.0	97.7	81.5	65.2	57.0
80°	126.2	130.3	122.1	114.0	101.8	85.6	69.3	57.0	40.7	32.6	24.4
82.5°	81.5	81.5	77.4	69.3	61.1	48.9	40.7	28.5	20.4	16.3	12.2
85°	40.7	44.8	40.7	36.7	28.5	24.4	20.4	12.2	8.1	4.1	4.1
87.5°	16.3	16.3	16.3	12.2	12.2	8.1	4.1	4.1	4.1	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



TEST NUMBER: P584974

CATALOG NUMBER: HC855D010-HM82555840-81RWWH

**CANDELA DISTRIBUTION (continued):**

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	3005.2	3005.2	3005.2	3005.2	3005.2	3005.2	3005.2	3005.2	3005.2	3005.2
2.5°	2993.1	2993.1	2984.8	2980.9	2976.8	2972.7	2968.6	2964.6	2964.6	2968.6
5°	2968.6	2960.5	2944.2	2940.1	2927.9	2923.8	2915.7	2911.6	2915.7	2911.6
7.5°	2932.0	2915.7	2895.3	2887.1	2870.8	2862.7	2850.5	2850.5	2842.3	2846.4
10°	2883.1	2858.6	2834.2	2818.0	2805.7	2793.5	2785.4	2777.2	2773.2	2773.2
12.5°	2821.9	2793.5	2769.1	2744.6	2724.3	2716.1	2699.8	2699.8	2691.7	2687.6
15°	2752.8	2716.1	2687.6	2663.1	2646.8	2630.6	2618.4	2610.3	2602.1	2602.1
17.5°	2663.1	2630.6	2602.1	2573.6	2549.2	2536.9	2524.7	2512.5	2512.5	2504.3
20°	2565.5	2528.8	2504.3	2475.8	2455.5	2435.2	2418.9	2418.9	2410.7	2414.8
22.5°	2455.5	2410.7	2386.3	2365.9	2345.5	2329.2	2312.9	2312.9	2309.0	2304.9
25°	2333.3	2296.7	2268.2	2243.8	2231.5	2215.2	2211.2	2203.0	2198.9	2198.9
27.5°	2203.0	2174.5	2137.8	2125.7	2109.4	2101.3	2101.3	2097.2	2089.0	2093.1
30°	2064.6	2032.0	2011.6	2003.5	1987.2	1987.2	1983.1	1974.9	1974.9	1979.0
32.5°	1930.2	1897.6	1881.3	1877.3	1861.0	1861.0	1856.9	1861.0	1861.0	1865.0
35°	1783.5	1755.1	1751.0	1738.8	1734.7	1734.7	1734.7	1742.9	1751.0	1738.8
37.5°	1645.1	1624.7	1612.6	1608.5	1612.6	1612.6	1616.7	1628.8	1624.7	1620.8
40°	1502.6	1486.3	1478.2	1478.2	1486.3	1494.5	1494.5	1506.7	1510.7	1506.7
42.5°	1360.1	1347.9	1347.9	1351.9	1360.1	1364.2	1376.4	1388.6	1392.7	1396.8
45°	1225.7	1225.7	1225.7	1229.8	1233.9	1242.0	1258.3	1270.6	1274.6	1278.7
47.5°	1095.4	1091.4	1103.6	1107.7	1119.8	1123.9	1136.1	1152.4	1156.5	1160.5
50°	973.2	981.4	985.4	997.7	1005.8	1005.8	1022.1	1030.3	1042.5	1042.5
52.5°	859.2	871.4	875.5	887.7	891.8	895.9	904.0	916.3	924.4	924.4
55°	757.5	761.4	769.7	773.8	785.9	790.0	798.1	802.2	814.4	810.3
56°	712.6	720.8	724.9	733.0	741.2	745.2	753.4	757.5	765.6	769.7
57°	671.9	676.0	688.2	692.3	700.4	700.4	704.5	716.7	716.7	720.8
58°	631.2	639.3	643.4	647.4	655.6	659.7	667.8	671.9	676.0	671.9
59°	594.6	598.7	602.6	602.6	610.8	610.8	623.0	631.2	635.2	635.2
60°	557.9	557.9	562.0	566.1	574.2	578.3	578.3	586.4	586.4	586.4
61°	521.2	521.2	525.3	529.4	533.5	533.5	541.6	541.6	545.7	549.8
62°	488.6	484.6	484.6	488.6	488.6	496.8	500.9	504.9	509.0	504.9
63°	452.0	447.9	447.9	447.9	447.9	456.0	456.0	460.1	468.3	464.2
64°	411.3	411.3	411.3	411.3	415.4	415.4	423.6	427.5	431.6	435.7
65°	382.8	374.7	370.6	370.6	374.7	378.7	382.8	386.9	391.0	391.0
66°	350.2	342.1	338.0	338.0	338.0	338.0	346.1	346.1	354.3	354.3
67°	313.5	305.4	301.3	297.2	297.2	297.2	309.5	305.4	305.4	305.4
67.5°	301.3	289.1	285.0	280.9	276.9	285.0	280.9	285.0	285.0	280.9
68°	285.0	276.9	268.7	260.7	260.7	260.7	264.6	268.7	264.6	260.7
69°	252.4	248.3	236.2	228.1	224.0	228.1	224.0	228.1	224.0	228.1
70°	224.0	211.8	199.6	195.5	191.4	191.4	191.4	187.3	191.4	187.3
71°	195.5	183.3	171.0	162.9	158.8	158.8	154.7	158.8	154.7	158.8
72°	167.0	154.7	138.4	130.3	130.3	130.3	130.3	126.2	130.3	126.2
72.5°	154.7	138.4	126.2	118.1	114.0	114.0	114.0	114.0	109.9	114.0
73°	142.5	126.2	109.9	105.8	105.8	105.8	101.8	97.7	101.8	101.8





TEST NUMBER: P584974

CATALOG NUMBER: HC855D010-HM82555840-81RWWH

**CANDELA DISTRIBUTION (continued):**

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
77.5°	48.9	36.7	32.6	32.6	32.6	32.6	32.6	32.6	28.5	28.5
80°	20.4	16.3	12.2	12.2	12.2	12.2	12.2	12.2	12.2	12.2
82.5°	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1
85°	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
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°	264.6	264.6	256.6	244.4	224.0	203.6	187.3	171.0	150.7	130.3	122.1
75°	244.4	240.3	232.1	219.9	203.6	183.3	167.0	146.6	130.3	109.9	101.8







74°	118.1	97.7	89.5	81.5	81.5	81.5	77.4	77.4	77.4	81.5
75°	93.6	77.4	69.3	61.1	65.2	61.1	65.2	61.1	61.1	61.1



(END OF REPORT)