

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: P585229

Luminaire Tested: **HC880D010-HM86080835-81RWWH**

Issue Date: 10/21/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P585229  
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: HC880D010-HM86080835-81RWWH  
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: 6882.2 lumens  
Efficiency: N/A  
Efficacy: 98.3 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

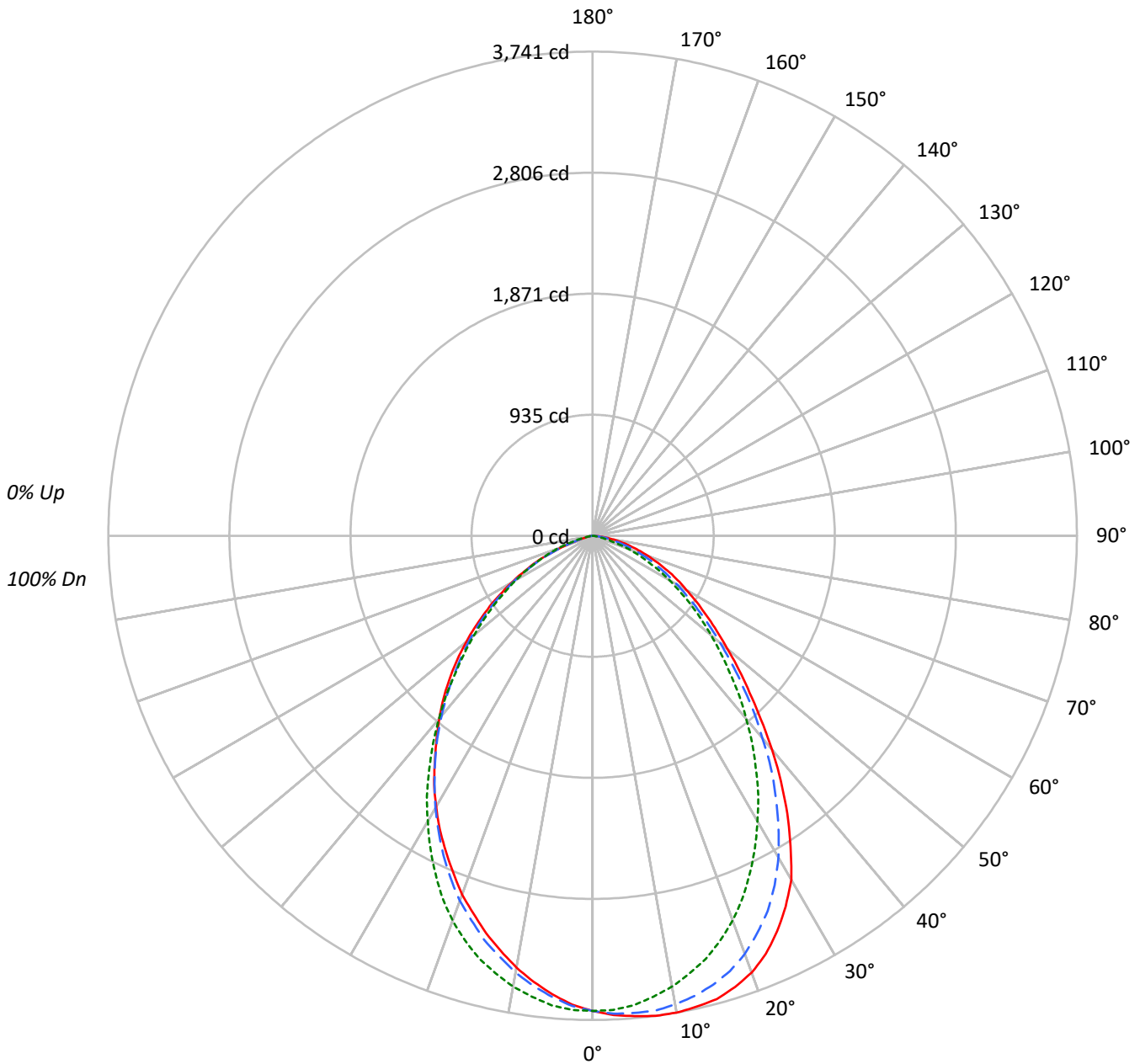
Input Watts (W): 70  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	113206	113206	113206
5°	115332	112713	110098
10°	117132	110744	106073
15°	118311	107986	101477
20°	117856	103818	96799
25°	114753	97826	91396
30°	109288	90690	86083
35°	98684	82768	79956
40°	86707	74293	74091
45°	74842	65296	68117
50°	65152	57275	61089
55°	57767	49745	53224
60°	51540	42030	44182
65°	46457	34118	34841
70°	41257	25569	20637
75°	35552	14821	8900
80°	27383	5292	2664
85°	17584	1769	1769



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	344.6	5.0
10°-20°	959.4	13.9
20°-30°	1356.9	19.7
30°-40°	1429.8	20.8
40°-50°	1215.2	17.7
50°-60°	875.0	12.7
60°-70°	504.8	7.3
70°-80°	172.7	2.5
80°-90°	23.8	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°	2660.9	38.7
0°-40°	4090.8	59.4
0°-60°	6181.0	89.8
0°-90°	6882.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6882.2	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	3671	3671	3671	3671	3671	
5°	3726	3701	3641	3577	3557	356
15°	3706	3592	3383	3233	3179	1043
25°	3373	3198	2875	2726	2686	1547
35°	2622	2467	2199	2119	2124	1633
45°	1716	1636	1497	1507	1562	1333
55°	1074	990	925	960	990	967
65°	637	547	468	458	478	633
75°	298	224	124	80	75	315
85°	50	30	5	5	5	67
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°	3671.2	3671.2	3671.2	3671.2	3671.2	3671.2	3671.2	3671.2	3671.2	3671.2	3671.2
2.5°	3706.0	3711.0	3706.0	3706.0	3701.0	3696.0	3691.0	3686.0	3676.2	3666.2	3666.2
5°	3725.9	3735.8	3725.9	3725.9	3711.0	3701.0	3691.0	3676.2	3656.2	3641.3	3641.3
7.5°	3740.8	3740.8	3740.8	3725.9	3715.9	3701.0	3676.2	3651.3	3626.3	3601.5	3591.5
10°	3740.8	3740.8	3735.8	3715.9	3706.0	3676.2	3651.3	3616.5	3581.6	3546.8	3536.8
12.5°	3725.9	3730.8	3720.9	3701.0	3676.2	3641.3	3606.5	3561.6	3521.9	3482.1	3462.2
15°	3706.0	3701.0	3691.0	3666.2	3636.3	3591.5	3556.8	3507.0	3452.3	3402.6	3382.6
17.5°	3656.2	3656.2	3641.3	3616.5	3576.6	3526.9	3472.1	3417.4	3357.7	3303.0	3278.2
20°	3591.5	3591.5	3571.6	3541.8	3502.0	3437.4	3377.6	3313.0	3243.4	3188.7	3163.7
22.5°	3497.1	3502.0	3477.1	3442.3	3397.6	3322.9	3263.2	3183.7	3114.0	3049.3	3029.5
25°	3372.7	3382.6	3357.7	3322.9	3263.2	3198.5	3124.0	3049.3	2969.8	2905.1	2875.2
27.5°	3228.4	3233.4	3208.5	3173.7	3114.0	3044.3	2969.8	2890.1	2815.6	2745.9	2716.0
30°	3069.3	3049.3	3039.4	2994.6	2929.9	2870.2	2785.7	2721.0	2641.5	2581.8	2547.0
32.5°	2845.4	2855.4	2825.5	2790.7	2740.9	2671.3	2601.7	2527.0	2452.4	2407.6	2382.8
35°	2621.5	2631.5	2616.5	2581.8	2527.0	2467.3	2397.7	2342.9	2278.2	2223.5	2198.7
37.5°	2387.7	2387.7	2377.8	2357.9	2318.1	2263.4	2193.7	2139.0	2084.3	2039.5	2024.6
40°	2154.0	2144.0	2139.0	2124.0	2089.3	2039.5	1994.8	1950.0	1895.3	1865.4	1845.6
42.5°	1925.1	1925.1	1915.1	1900.3	1865.4	1840.6	1795.7	1746.0	1706.2	1676.4	1676.4
45°	1716.2	1721.2	1706.2	1696.2	1676.4	1636.5	1596.8	1562.0	1527.2	1507.3	1497.3
47.5°	1532.1	1532.1	1517.2	1507.3	1487.3	1452.5	1417.8	1387.9	1363.0	1348.1	1343.1
50°	1358.1	1358.1	1358.1	1333.1	1308.3	1283.4	1258.6	1223.7	1208.7	1198.9	1193.9
52.5°	1208.7	1203.9	1203.9	1183.9	1159.0	1129.2	1104.3	1074.5	1059.5	1049.6	1054.5
55°	1074.5	1074.5	1069.5	1044.7	1019.8	990.0	965.0	940.1	930.3	920.3	925.3
56°	1019.8	1019.8	1014.8	994.8	965.0	940.1	910.3	885.4	870.6	875.5	875.5
57°	980.0	970.0	970.0	945.1	920.3	885.4	860.6	835.7	825.8	820.8	820.8
58°	930.3	925.3	920.3	895.4	870.6	840.6	815.8	790.9	776.1	776.1	771.1
59°	880.5	880.5	870.6	850.6	825.8	795.9	771.1	746.2	731.2	726.2	726.2
60°	835.7	840.6	825.8	805.9	785.9	751.1	721.2	701.4	686.5	681.5	681.5
61°	795.9	795.9	785.9	761.1	736.2	711.4	681.5	656.7	646.7	636.7	636.7
62°	761.1	751.1	746.2	721.2	696.4	666.6	641.7	616.9	601.9	592.0	596.9
63°	716.4	711.4	701.4	681.5	656.7	626.7	596.9	577.0	562.2	547.2	552.2
64°	681.5	676.5	661.6	641.7	616.9	587.0	557.2	537.2	527.3	512.3	507.3
65°	636.7	631.7	626.7	601.9	577.0	547.2	522.3	502.5	487.5	477.5	467.6
66°	596.9	601.9	592.0	572.0	542.2	517.3	482.5	462.6	452.7	437.8	427.8
67°	562.2	562.2	552.2	532.3	502.5	477.5	452.7	427.8	412.8	398.0	393.0
67.5°	542.2	542.2	532.3	507.3	487.5	457.6	432.8	412.8	393.0	383.0	373.1
68°	522.3	522.3	517.3	497.5	472.6	442.8	417.8	393.0	373.1	358.1	353.1
69°	487.5	492.5	482.5	462.6	437.8	407.9	383.0	363.1	343.3	328.3	318.4
70°	457.6	452.7	442.8	422.8	398.0	378.1	353.1	328.3	308.4	288.6	283.6
71°	417.8	417.8	407.9	393.0	368.1	343.3	318.4	298.4	278.6	253.7	248.7
72°	388.0	388.0	378.1	358.1	338.3	313.4	288.6	263.6	248.7	223.9	213.9
72.5°	368.1	373.1	363.1	343.3	323.3	293.4	273.6	253.7	228.9	208.9	198.9
73°	358.1	353.1	348.3	328.3	303.4	283.6	258.7	238.8	213.9	194.0	184.1



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
77.5°	223.9	223.9	218.9	198.9	179.1	159.2	139.2	119.4	99.5	79.5	69.7
80°	154.2	159.2	149.2	139.2	124.4	104.5	84.5	69.7	49.7	39.8	29.8
82.5°	99.5	99.5	94.5	84.5	74.7	59.7	49.7	34.8	24.9	19.9	15.0
85°	49.7	54.7	49.7	44.8	34.8	29.8	24.9	15.0	10.0	5.0	5.0
87.5°	19.9	19.9	19.9	15.0	15.0	10.0	5.0	5.0	5.0	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	0.0



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**CANDELA DISTRIBUTION (continued):**

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	3671.2	3671.2	3671.2	3671.2	3671.2	3671.2	3671.2	3671.2	3671.2	3671.2
2.5°	3656.2	3656.2	3646.3	3641.3	3636.3	3631.3	3626.3	3621.3	3621.3	3626.3
5°	3626.3	3616.5	3596.5	3591.5	3576.6	3571.6	3561.6	3556.8	3561.6	3556.8
7.5°	3581.6	3561.6	3536.8	3526.9	3507.0	3497.1	3482.1	3482.1	3472.1	3477.1
10°	3521.9	3492.1	3462.2	3442.3	3427.4	3412.4	3402.6	3392.6	3387.6	3387.6
12.5°	3447.3	3412.4	3382.6	3352.7	3327.9	3317.9	3298.0	3298.0	3288.1	3283.2
15°	3362.7	3317.9	3283.2	3253.3	3233.4	3213.5	3198.5	3188.7	3178.7	3178.7
17.5°	3253.3	3213.5	3178.7	3143.8	3114.0	3099.1	3084.1	3069.3	3069.3	3059.3
20°	3133.8	3089.1	3059.3	3024.5	2999.6	2974.8	2954.8	2954.8	2944.9	2949.8
22.5°	2999.6	2944.9	2915.1	2890.1	2865.3	2845.4	2825.5	2825.5	2820.5	2815.6
25°	2850.4	2805.6	2770.7	2740.9	2726.0	2706.0	2701.2	2691.2	2686.2	2686.2
27.5°	2691.2	2656.3	2611.6	2596.7	2576.8	2566.8	2566.8	2561.8	2551.8	2556.8
30°	2522.0	2482.3	2457.4	2447.4	2427.6	2427.6	2422.6	2412.6	2412.6	2417.6
32.5°	2357.9	2318.1	2298.2	2293.2	2273.4	2273.4	2268.4	2273.4	2273.4	2278.2
35°	2178.8	2144.0	2139.0	2124.0	2119.2	2119.2	2119.2	2129.0	2139.0	2124.0
37.5°	2009.6	1984.8	1969.9	1964.9	1969.9	1969.9	1974.8	1989.8	1984.8	1979.8
40°	1835.6	1815.7	1805.7	1805.7	1815.7	1825.6	1825.6	1840.6	1845.6	1840.6
42.5°	1661.5	1646.5	1646.5	1651.5	1661.5	1666.4	1681.4	1696.2	1701.2	1706.2
45°	1497.3	1497.3	1497.3	1502.3	1507.3	1517.2	1537.1	1552.0	1557.0	1562.0
47.5°	1338.1	1333.1	1348.1	1353.1	1367.9	1372.9	1387.9	1407.8	1412.8	1417.8
50°	1188.9	1198.9	1203.9	1218.7	1228.7	1228.7	1248.6	1258.6	1273.4	1273.4
52.5°	1049.6	1064.5	1069.5	1084.5	1089.4	1094.4	1104.3	1119.2	1129.2	1129.2
55°	925.3	930.3	940.1	945.1	960.1	965.0	975.0	980.0	994.8	990.0
56°	870.6	880.5	885.4	895.4	905.3	910.3	920.3	925.3	935.1	940.1
57°	820.8	825.8	840.6	845.6	855.6	855.6	860.6	875.5	875.5	880.5
58°	771.1	780.9	785.9	790.9	800.9	805.9	815.8	820.8	825.8	820.8
59°	726.2	731.2	736.2	736.2	746.2	746.2	761.1	771.1	776.1	776.1
60°	681.5	681.5	686.5	691.4	701.4	706.4	706.4	716.4	716.4	716.4
61°	636.7	636.7	641.7	646.7	651.7	651.7	661.6	661.6	666.6	671.5
62°	596.9	592.0	592.0	596.9	596.9	606.9	611.9	616.9	621.8	616.9
63°	552.2	547.2	547.2	547.2	547.2	557.2	557.2	562.2	572.0	567.0
64°	502.5	502.5	502.5	502.5	507.3	507.3	517.3	522.3	527.3	532.3
65°	467.6	457.6	452.7	452.7	457.6	462.6	467.6	472.6	477.5	477.5
66°	427.8	417.8	412.8	412.8	412.8	412.8	422.8	422.8	432.8	432.8
67°	383.0	373.1	368.1	363.1	363.1	363.1	378.1	373.1	373.1	373.1
67.5°	368.1	353.1	348.3	343.3	338.3	348.3	343.3	348.3	348.3	343.3
68°	348.3	338.3	328.3	318.4	318.4	318.4	323.3	328.3	323.3	318.4
69°	308.4	303.4	288.6	278.6	273.6	278.6	273.6	278.6	273.6	278.6
70°	273.6	258.7	243.7	238.8	233.8	233.8	233.8	228.9	233.8	228.9
71°	238.8	223.9	208.9	198.9	194.0	194.0	189.1	194.0	189.1	194.0
72°	203.9	189.1	169.1	159.2	159.2	159.2	159.2	154.2	159.2	154.2
72.5°	189.1	169.1	154.2	144.2	139.2	139.2	139.2	139.2	134.4	139.2
73°	174.1	154.2	134.4	129.4	129.4	129.4	124.4	119.4	124.4	124.4





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**CANDELA DISTRIBUTION (continued):**

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
77.5°	59.7	44.8	39.8	39.8	39.8	39.8	39.8	39.8	34.8	34.8
80°	24.9	19.9	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
82.5°	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
85°	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
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°	323.3	323.3	313.4	298.4	273.6	248.7	228.9	208.9	184.1	159.2	149.2
75°	298.4	293.4	283.6	268.6	248.7	223.9	203.9	179.1	159.2	134.4	124.4







74°	144.2	119.4	109.4	99.5	99.5	99.5	94.5	94.5	94.5	99.5
75°	114.4	94.5	84.5	74.7	79.5	74.7	79.5	74.7	74.7	74.7



(END OF REPORT)