

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: P582754

Luminaire Tested: **HC650D010-HM64560835-61WWW**

Issue Date: 9/16/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P582754  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2105-241-16)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/16/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HC650D010-HM64560835-61WWW  
Description: HALO COMMERCIAL 6" ROUND, NEW CONSTRUCTION FRAME, WITH 6" WALLWASH DISTRIBUTION, WHITE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5042.8 lumens  
Efficiency: N/A  
Efficacy: 105.1 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1.06 / 1.14  
Luminous Opening: Circular (Dia: 0.5' x H: 0')  
CIE Type: Direct

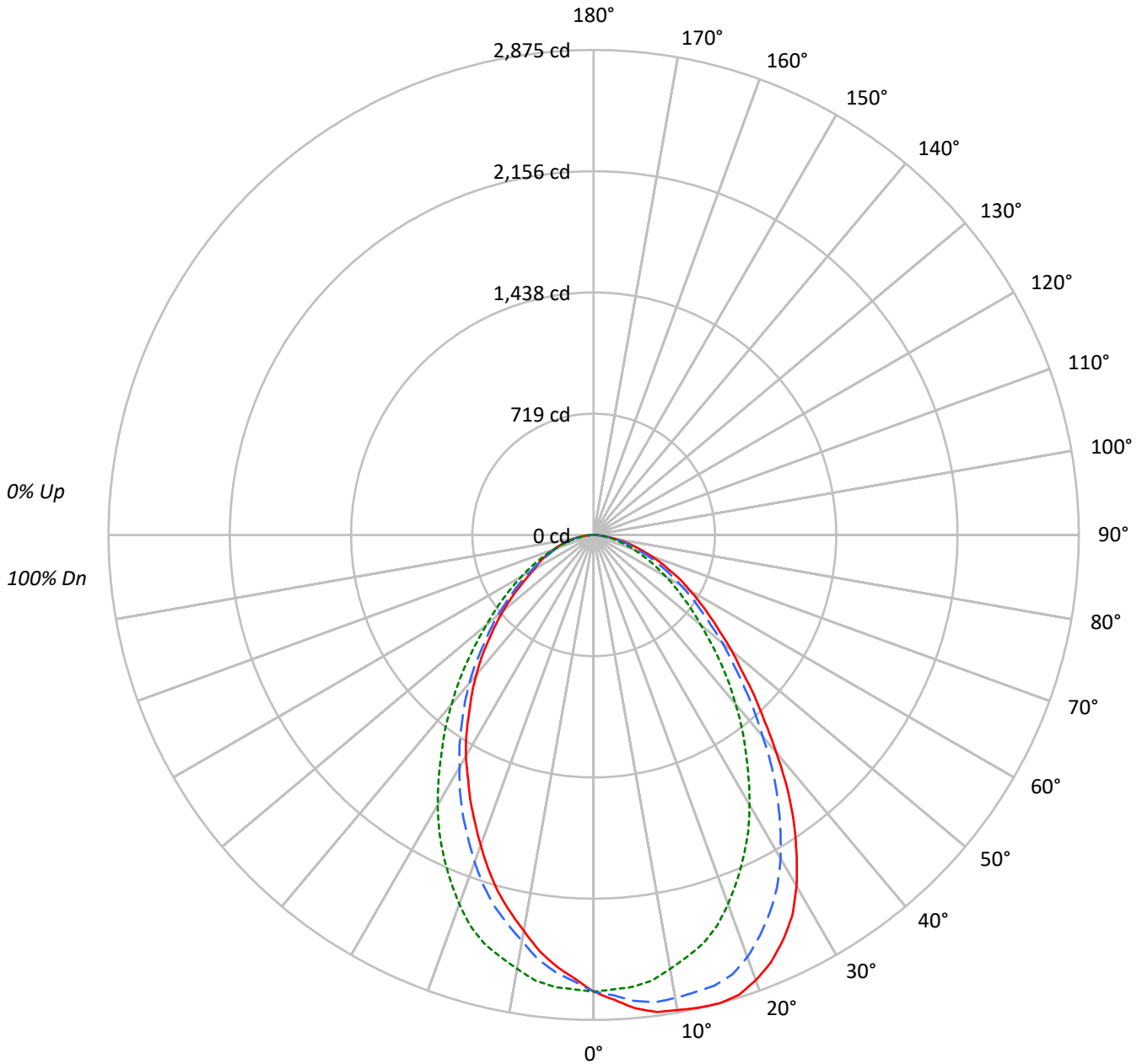
Input Watts (W): 48  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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								
1	110	106	103	99	108	104	101	98	100	97	95	96	94	92	93	91	89	87								
2	102	95	89	84	99	93	88	83	90	85	81	86	83	79	83	80	78	76								
3	94	85	78	72	92	83	77	71	80	75	70	78	73	69	75	71	68	66								
4	87	76	69	63	85	75	68	62	73	67	62	71	65	61	69	64	60	58								
5	81	69	61	55	79	68	61	55	66	60	55	64	59	54	63	58	53	51								
6	75	63	55	49	73	62	55	49	61	54	49	59	53	48	57	52	48	46								
7	70	58	50	44	69	57	50	44	56	49	44	54	48	44	53	48	43	42								
8	66	53	46	40	64	53	45	40	51	45	40	50	44	40	49	44	39	38								
9	62	49	42	37	60	49	42	37	48	41	36	47	41	36	46	40	36	34								
10	58	46	39	34	57	45	38	34	44	38	33	44	38	33	43	37	33	32								

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°
0°	148404	148404	148404
5°	154985	147969	141151
10°	159210	145421	132646
15°	163151	142271	124274
20°	163878	135823	114145
25°	160443	127163	104679
30°	152226	116929	95945
35°	138256	105096	86070
40°	120461	93611	77445
45°	104236	81915	68077
50°	91042	70539	59657
55°	80446	61981	51191
60°	72308	54327	44339
65°	64754	47255	43001
70°	57814	40295	40295
75°	50156	33953	37829
80°	40251	28760	34537
85°	27487	25160	29814



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	254.4	5.0
10°-20°	707.3	14.0
20°-30°	985.6	19.5
30°-40°	1015.6	20.1
40°-50°	841.7	16.7
50°-60°	604.9	12.0
60°-70°	385.2	7.6
70°-80°	197.8	3.9
80°-90°	50.3	1.0
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°	1947.3	38.6
0°-40°	2962.9	58.8
0°-60°	4409.4	87.4
0°-90°	5042.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5042.8	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	2707	2707	2707	2707	2707	
5°	2816	2773	2689	2602	2565	270
15°	2875	2765	2507	2277	2190	810
25°	2652	2470	2102	1833	1731	1215
35°	2066	1898	1570	1363	1286	1283
45°	1344	1250	1057	922	878	1041
55°	842	772	648	576	536	758
65°	499	444	364	317	332	500
75°	237	204	160	168	179	253
85°	44	40	40	44	47	56
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	2707.1	2707.1	2707.1	2707.1	2707.1	2707.1	2707.1	2707.1	2707.1
2.5°	2758.1	2747.2	2732.6	2718.1	2696.2	2670.7	2648.9	2641.5	2630.6
5°	2816.4	2801.8	2772.8	2736.3	2688.9	2641.5	2601.5	2576.0	2565.0
7.5°	2852.8	2834.6	2794.6	2732.6	2663.4	2594.2	2535.8	2499.5	2484.8
10°	2860.1	2842.0	2787.3	2703.4	2612.4	2517.7	2444.8	2401.1	2382.9
12.5°	2871.1	2845.6	2776.3	2678.0	2561.4	2452.1	2360.9	2306.4	2288.1
15°	2874.7	2845.6	2765.4	2645.2	2506.8	2375.6	2277.2	2211.7	2189.7
17.5°	2860.1	2827.3	2732.6	2586.9	2430.3	2291.7	2175.2	2106.0	2076.8
20°	2809.1	2772.8	2663.4	2499.5	2328.2	2182.5	2062.3	1989.4	1956.6
22.5°	2743.6	2696.2	2572.3	2397.4	2218.9	2065.9	1945.6	1872.7	1840.0
25°	2652.5	2608.7	2470.3	2284.5	2102.3	1942.0	1832.7	1756.1	1730.6
27.5°	2546.8	2495.8	2353.7	2167.8	1982.1	1821.8	1716.1	1646.9	1614.1
30°	2404.8	2357.4	2215.2	2029.4	1847.2	1697.9	1588.6	1530.2	1515.7
32.5°	2237.2	2197.0	2058.6	1883.7	1708.8	1570.4	1479.3	1417.3	1402.8
35°	2065.9	2018.4	1898.2	1734.3	1570.4	1446.5	1362.6	1308.1	1286.1
37.5°	1880.0	1836.3	1734.3	1588.6	1442.8	1326.3	1253.4	1206.0	1184.2
40°	1683.3	1650.6	1555.7	1439.2	1308.1	1206.0	1144.0	1104.0	1082.2
42.5°	1501.2	1468.3	1402.8	1293.4	1184.2	1093.0	1038.5	1002.0	983.8
45°	1344.5	1315.3	1249.7	1155.0	1056.6	980.1	921.8	896.3	878.1
47.5°	1187.7	1173.2	1114.9	1027.5	936.4	870.8	830.7	801.5	787.0
50°	1067.5	1049.3	994.6	903.6	827.1	776.0	739.7	714.2	699.5
52.5°	943.6	925.4	874.4	797.9	736.0	688.6	652.1	630.3	615.8
55°	841.7	827.1	772.4	703.2	648.5	608.5	575.6	550.2	535.6
57.5°	746.9	732.3	681.3	615.8	568.4	531.9	502.8	480.9	462.7
60°	659.5	648.5	597.6	535.6	495.5	459.1	433.5	415.4	404.4
62.5°	582.9	561.1	517.4	462.7	426.3	397.2	371.7	360.7	368.0
65°	499.2	488.2	444.5	397.2	364.3	335.2	317.0	324.3	331.5
67.5°	429.9	415.4	379.0	335.2	306.0	284.1	273.3	287.8	291.5
70°	360.7	346.2	313.3	276.9	251.4	236.8	236.8	247.8	251.4
72.5°	295.1	284.1	255.1	225.9	207.7	196.8	204.1	211.3	214.9
75°	236.8	225.9	204.1	178.6	160.3	160.3	167.6	174.9	178.6
77.5°	182.2	174.9	153.1	134.8	127.5	127.5	134.8	138.4	142.1
80°	127.5	120.2	109.4	98.4	91.1	98.4	105.7	105.7	109.4
82.5°	83.9	80.2	72.9	65.5	65.5	69.2	72.9	76.5	76.5
85°	43.7	43.7	40.0	36.5	40.0	43.7	43.7	47.4	47.4
87.5°	14.5	14.5	14.5	14.5	18.2	18.2	18.2	18.2	18.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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— 0°-180°    - - 45°-225°    - - - - 90°-270°







(END OF REPORT)