

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: P582647

Luminaire Tested: **HC645D010-HM64560927-61WWWB**

Issue Date: 9/16/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P582647  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2105-241-18)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/16/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HC645D010-HM64560927-61WWWB  
Description: HALO COMMERCIAL 6" ROUND, NEW CONSTRUCTION FRAME, WITH 6" WALLWASH DISTRIBUTION, BLACK BAFFLE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3635.6 lumens  
Efficiency: N/A  
Efficacy: 82.6 lumens/watt  
Spacing Criteria (0/90/45): 1.17 / 1.09 / 1.17  
Luminous Opening: Circular (Dia: 0.5' x H: 0')  
CIE Type: Direct

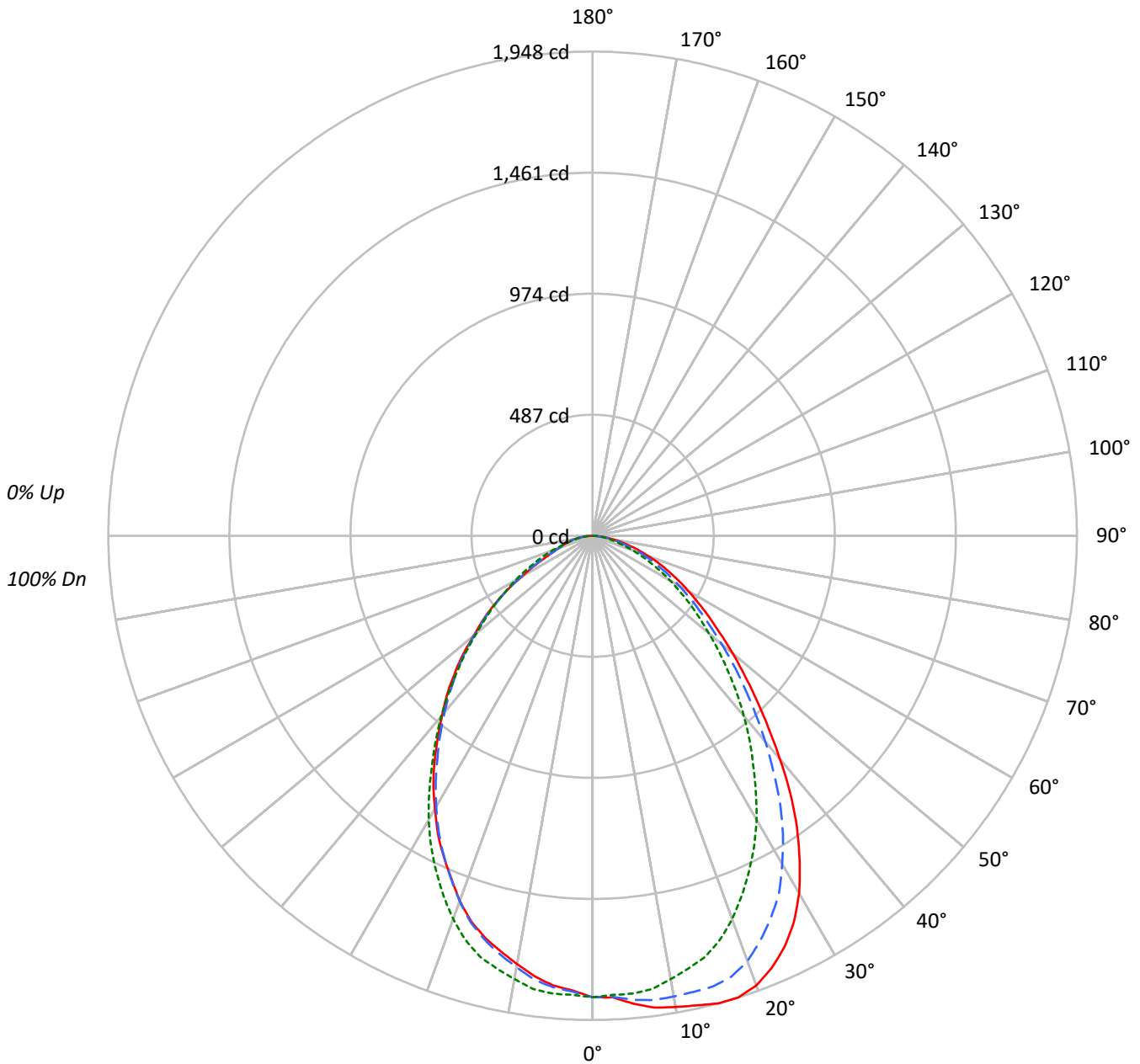
Input Watts (W): 44  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20									20									20									20									
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	103	100	108	104	101	98	100	97	95	96	94	92	93	91	89	87																			
2	102	95	89	84	100	93	88	83	90	85	81	87	83	80	84	81	78	76																			
3	94	85	78	72	92	84	77	72	81	75	71	78	73	69	76	72	68	66																			
4	87	77	69	63	85	75	68	63	73	67	62	71	65	61	69	64	60	58																			
5	81	70	61	56	79	68	61	55	66	60	55	65	59	54	63	58	54	52																			
6	75	63	55	49	74	62	55	49	61	54	49	59	53	48	58	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	38	34	57	45	38	33	44	38	33	43	37	33	43	37	33	31																			

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

	0°	90°	180°
0°	101774	101774	101774
5°	103978	101744	99928
10°	107151	100800	97410
15°	110545	99461	95001
20°	112296	95727	91142
25°	110450	90054	85910
30°	105155	83481	80266
35°	95894	75362	74171
40°	83850	67698	67333
45°	72163	59572	60944
50°	62727	51913	52988
55°	54775	45571	46058
60°	48669	39481	36148
65°	43429	33233	27629
70°	38212	27248	23161
75°	32767	21499	22007
80°	26392	18405	21625
85°	17549	15913	19121



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	175.8	4.8
10°-20°	500.4	13.8
20°-30°	714.3	19.6
30°-40°	748.2	20.6
40°-50°	630.0	17.3
50°-60°	448.4	12.3
60°-70°	262.5	7.2
70°-80°	124.2	3.4
80°-90°	32.0	0.9
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°	1390.5	38.2
0°-40°	2138.7	58.8
0°-60°	3217.0	88.5
0°-90°	3635.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3635.6	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1856	1856	1856	1856	1856	
5°	1890	1874	1849	1823	1816	182
15°	1948	1877	1752	1682	1674	550
25°	1826	1697	1489	1418	1420	836
35°	1433	1314	1126	1088	1108	890
45°	931	862	768	771	786	723
55°	573	525	477	477	482	517
65°	335	297	256	216	213	334
75°	155	129	102	99	104	166
85°	28	23	25	30	30	36
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°	1856.5	1856.5	1856.5	1856.5	1856.5	1856.5	1856.5	1856.5	1856.5
2.5°	1859.0	1859.0	1856.5	1853.9	1848.9	1841.3	1836.2	1831.1	1831.1
5°	1889.5	1884.3	1874.2	1861.6	1848.9	1833.6	1823.4	1815.9	1815.9
7.5°	1914.8	1904.6	1884.3	1861.6	1838.7	1818.4	1800.7	1790.5	1788.0
10°	1924.9	1912.2	1881.8	1846.3	1810.8	1783.0	1762.7	1749.9	1749.9
12.5°	1935.1	1919.8	1879.3	1828.6	1783.0	1744.8	1724.5	1714.5	1711.9
15°	1947.8	1927.5	1876.8	1813.3	1752.5	1709.4	1681.5	1673.9	1673.9
17.5°	1947.8	1922.4	1859.0	1780.4	1704.3	1656.0	1630.7	1623.1	1625.7
20°	1924.9	1897.0	1821.0	1724.5	1640.9	1590.1	1564.8	1559.7	1562.3
22.5°	1881.8	1848.9	1762.7	1658.6	1567.4	1514.1	1491.2	1491.2	1488.8
25°	1826.0	1790.5	1696.6	1587.7	1488.8	1435.4	1417.7	1420.3	1420.3
27.5°	1752.5	1716.9	1623.1	1506.5	1407.6	1354.3	1341.6	1346.7	1349.2
30°	1661.2	1623.1	1524.2	1410.1	1318.8	1265.5	1257.9	1265.5	1268.0
32.5°	1549.5	1521.7	1425.3	1308.6	1222.4	1176.8	1174.3	1181.8	1192.0
35°	1432.9	1402.4	1313.8	1207.3	1126.1	1088.0	1088.0	1100.6	1108.3
37.5°	1306.1	1275.6	1194.5	1105.8	1037.3	1001.7	1006.9	1019.6	1022.0
40°	1171.7	1148.8	1080.5	1004.3	946.0	918.1	925.7	938.4	940.9
42.5°	1044.9	1024.6	968.8	900.3	857.2	836.9	847.0	862.3	867.3
45°	930.8	907.9	862.3	804.0	768.4	758.3	771.0	781.1	786.1
47.5°	826.7	806.4	768.4	715.2	689.8	684.8	697.5	702.5	707.6
50°	735.5	715.2	677.2	629.0	608.7	608.7	618.9	623.9	621.3
52.5°	646.7	629.0	593.4	552.8	540.2	540.2	547.8	550.4	555.4
55°	573.1	555.4	525.0	486.9	476.8	471.7	476.8	476.8	481.9
57.5°	504.7	489.5	461.6	426.0	413.4	408.3	405.7	403.3	408.3
60°	443.9	431.2	400.7	370.3	360.1	347.4	337.4	327.1	329.7
62.5°	388.0	375.4	347.4	317.1	306.9	289.1	276.5	263.8	268.9
65°	334.8	322.1	296.8	271.3	256.2	235.9	215.6	208.0	213.0
67.5°	286.6	276.5	251.0	225.7	213.0	190.3	170.0	170.0	172.4
70°	238.4	228.3	208.0	185.1	170.0	149.7	142.1	144.5	144.5
72.5°	195.3	187.7	167.4	147.1	131.8	119.2	119.2	121.8	124.2
75°	154.7	149.7	129.4	111.6	101.5	93.8	98.9	101.5	103.9
77.5°	119.2	111.6	96.4	83.6	76.1	78.6	83.6	86.2	88.8
80°	83.6	81.2	68.5	60.9	58.3	60.9	65.9	68.5	68.5
82.5°	53.3	50.7	43.2	40.6	40.6	43.2	48.2	48.2	48.2
85°	27.9	25.3	22.9	22.9	25.3	27.9	30.4	30.4	30.4
87.5°	10.1	7.6	10.1	10.1	12.7	12.7	12.7	12.7	12.7
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)