

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: P581204

Luminaire Tested: **HC455D010-HM44560927-41RWWC**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P581204  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-14)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/9/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HC455D010-HM44560927-41RWWC  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, SPECULAR TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3945.7 lumens  
Efficiency: N/A  
Efficacy: 75.9 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.15 / 1.21  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

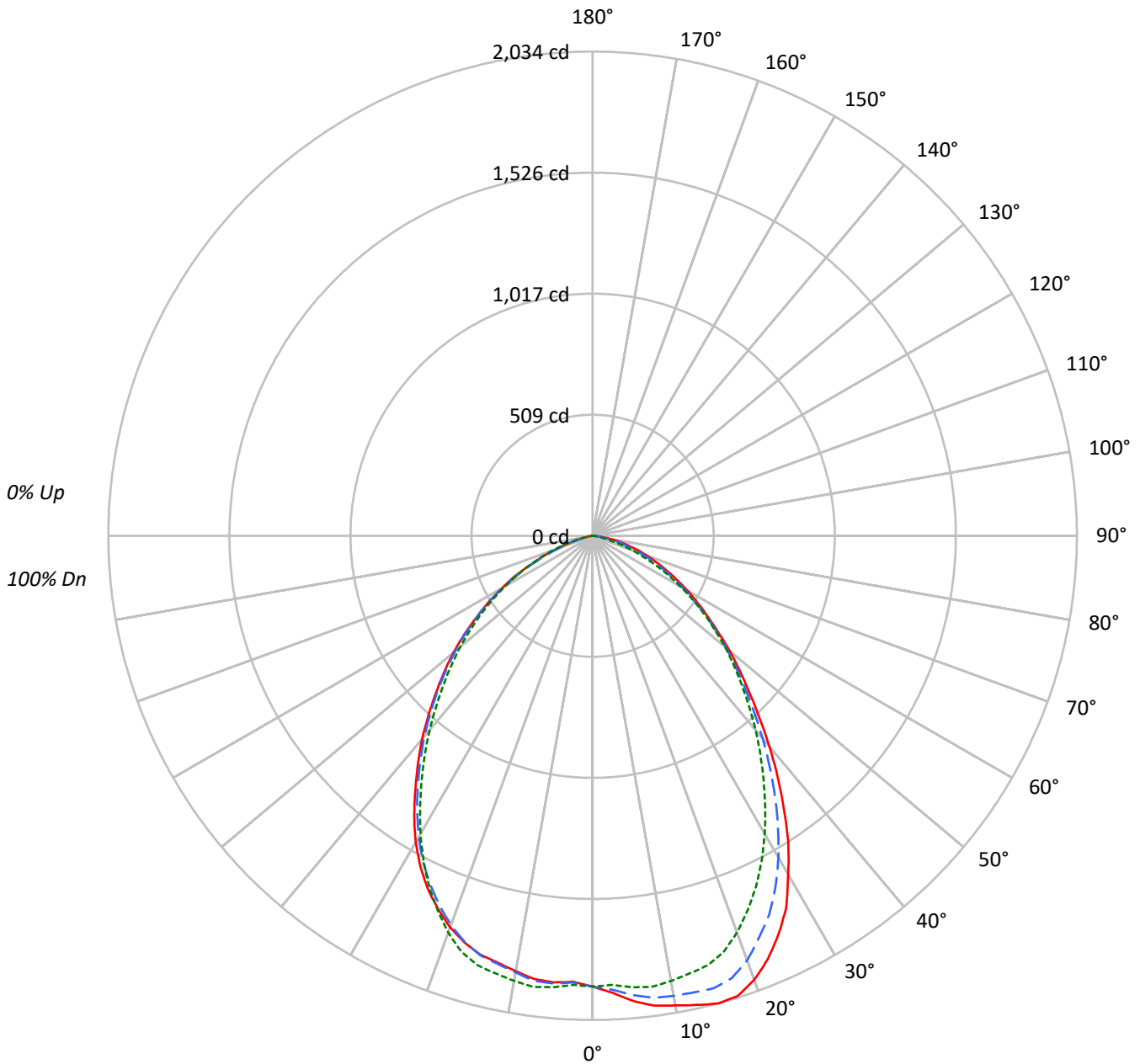
Input Watts (W): 52  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	105	102	99	101	98	96	97	95	93	93	92	90	88																			
2	102	95	90	85	100	94	88	84	90	86	82	87	83	80	84	81	78	76																			
3	95	85	78	73	92	84	77	72	81	75	71	78	74	70	76	72	69	67																			
4	87	77	69	63	85	76	68	63	73	67	62	71	66	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	49	44	56	49	44	54	48	44	53	47	43	41																			
8	66	53	45	40	64	53	45	40	51	44	40	50	44	39	49	43	39	37																			
9	62	49	42	36	60	49	41	36	47	41	36	46	40	36	45	40	36	34																			
10	58	46	38	33	57	45	38	33	44	38	33	43	37	33	42	37	33	31																			

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

	0°	90°	180°
0°	233555	233555	233555
5°	243003	235710	233172
10°	250935	237797	232661
15°	259761	238512	232638
20°	260620	232753	229734
25°	251425	221117	222872
30°	233965	205893	211732
35°	210748	188402	195329
40°	185813	171402	179227
45°	162471	154429	162017
50°	143861	138968	146317
55°	126555	122706	127673
60°	112985	104794	107927
65°	99320	85136	83618
70°	86734	62751	57197
75°	71962	37792	30501
80°	54481	14562	9092
85°	25333	3680	3680



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	182.6	4.6
10°-20°	533.0	13.5
20°-30°	771.8	19.6
30°-40°	814.3	20.6
40°-50°	704.8	17.9
50°-60°	522.1	13.2
60°-70°	301.0	7.6
70°-80°	105.1	2.7
80°-90°	11.1	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°	1487.4	37.7
0°-40°	2301.7	58.3
0°-60°	3528.6	89.4
0°-90°	3945.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3945.7	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1894	1894	1894	1894	1894	
5°	1963	1937	1904	1888	1883	189
15°	2034	1968	1868	1824	1822	572
25°	1847	1755	1625	1614	1638	846
35°	1400	1336	1251	1279	1297	874
45°	931	906	885	919	929	723
55°	588	576	571	591	594	531
65°	340	320	292	276	286	340
75°	151	128	79	64	64	162
85°	18	10	3	3	3	28
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°	1893.5	1893.5	1893.5	1893.5	1893.5	1893.5	1893.5	1893.5	1893.5
2.5°	1921.6	1916.4	1908.8	1898.6	1888.3	1880.7	1878.1	1875.5	1875.5
5°	1962.6	1952.3	1936.9	1916.4	1903.7	1896.0	1888.3	1883.2	1883.2
7.5°	1990.7	1980.4	1957.4	1929.3	1911.4	1896.0	1885.7	1878.1	1878.1
10°	2003.5	1990.7	1962.6	1926.7	1898.6	1878.1	1862.8	1857.6	1857.6
12.5°	2018.8	2003.5	1965.0	1919.0	1883.2	1857.6	1842.3	1837.1	1837.1
15°	2034.2	2016.2	1967.6	1914.0	1867.8	1837.1	1824.4	1821.8	1821.8
17.5°	2026.5	2003.5	1947.2	1883.2	1832.1	1801.4	1788.5	1788.5	1791.1
20°	1985.5	1962.6	1898.6	1826.9	1773.2	1750.2	1739.9	1745.0	1750.2
22.5°	1924.2	1896.0	1826.9	1757.8	1701.6	1681.1	1681.1	1688.7	1696.4
25°	1847.4	1821.8	1755.2	1678.5	1624.7	1609.4	1614.5	1627.3	1637.6
27.5°	1760.4	1732.3	1663.2	1591.5	1537.8	1530.1	1542.9	1560.8	1565.9
30°	1642.7	1619.7	1560.8	1491.8	1445.6	1443.1	1461.0	1473.9	1486.6
32.5°	1530.1	1504.6	1448.2	1381.7	1348.4	1351.0	1371.5	1386.8	1394.6
35°	1399.6	1376.6	1335.6	1281.9	1251.2	1256.3	1279.4	1294.6	1297.2
37.5°	1276.8	1261.5	1220.5	1179.6	1156.5	1166.7	1187.2	1205.1	1205.1
40°	1154.0	1141.2	1110.5	1077.2	1064.5	1077.2	1097.7	1113.1	1113.1
42.5°	1036.2	1028.6	1003.0	980.0	972.3	990.2	1008.1	1020.9	1018.4
45°	931.4	923.7	905.7	887.8	885.3	903.3	918.6	926.2	928.8
47.5°	836.7	831.6	816.2	803.5	803.5	821.4	834.2	841.8	844.4
50°	749.7	744.6	731.8	721.6	724.2	742.1	752.3	759.9	762.5
52.5°	662.7	660.2	649.9	637.1	644.8	657.6	670.4	675.4	678.0
55°	588.5	588.5	575.7	565.4	570.6	583.4	591.1	593.7	593.7
57.5°	522.0	519.4	504.1	493.9	496.4	509.2	514.4	516.8	516.8
60°	458.0	455.4	440.1	424.8	424.8	432.4	434.9	437.5	437.5
62.5°	396.6	394.1	376.1	363.4	358.2	355.6	355.6	360.8	371.0
65°	340.3	337.7	319.8	299.4	291.7	284.1	276.3	281.5	286.5
67.5°	289.1	284.1	266.1	248.2	230.3	217.5	204.8	212.4	222.6
70°	240.5	235.4	215.0	194.5	174.0	153.6	143.3	153.6	158.6
72.5°	194.5	189.3	168.9	148.4	122.8	102.4	99.8	102.4	105.0
75°	151.0	148.4	127.9	105.0	79.3	64.0	64.0	64.0	64.0
77.5°	112.6	107.4	87.0	66.5	46.0	35.8	33.3	33.3	33.3
80°	76.7	71.7	53.8	38.4	20.5	15.3	15.3	12.8	12.8
82.5°	43.5	40.9	28.1	15.3	7.6	5.1	5.1	5.1	5.1
85°	17.9	15.3	10.2	5.1	2.6	2.6	2.6	2.6	2.6
87.5°	2.6	2.6	2.6	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



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







(END OF REPORT)