

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: P580808

Luminaire Tested: **HC445D010-HM44560935-41RWWC**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P580808
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: HC445D010-HM44560935-41RWWC
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, SPECULAR TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4028.6 lumens
Efficiency: N/A
Efficacy: 91.6 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

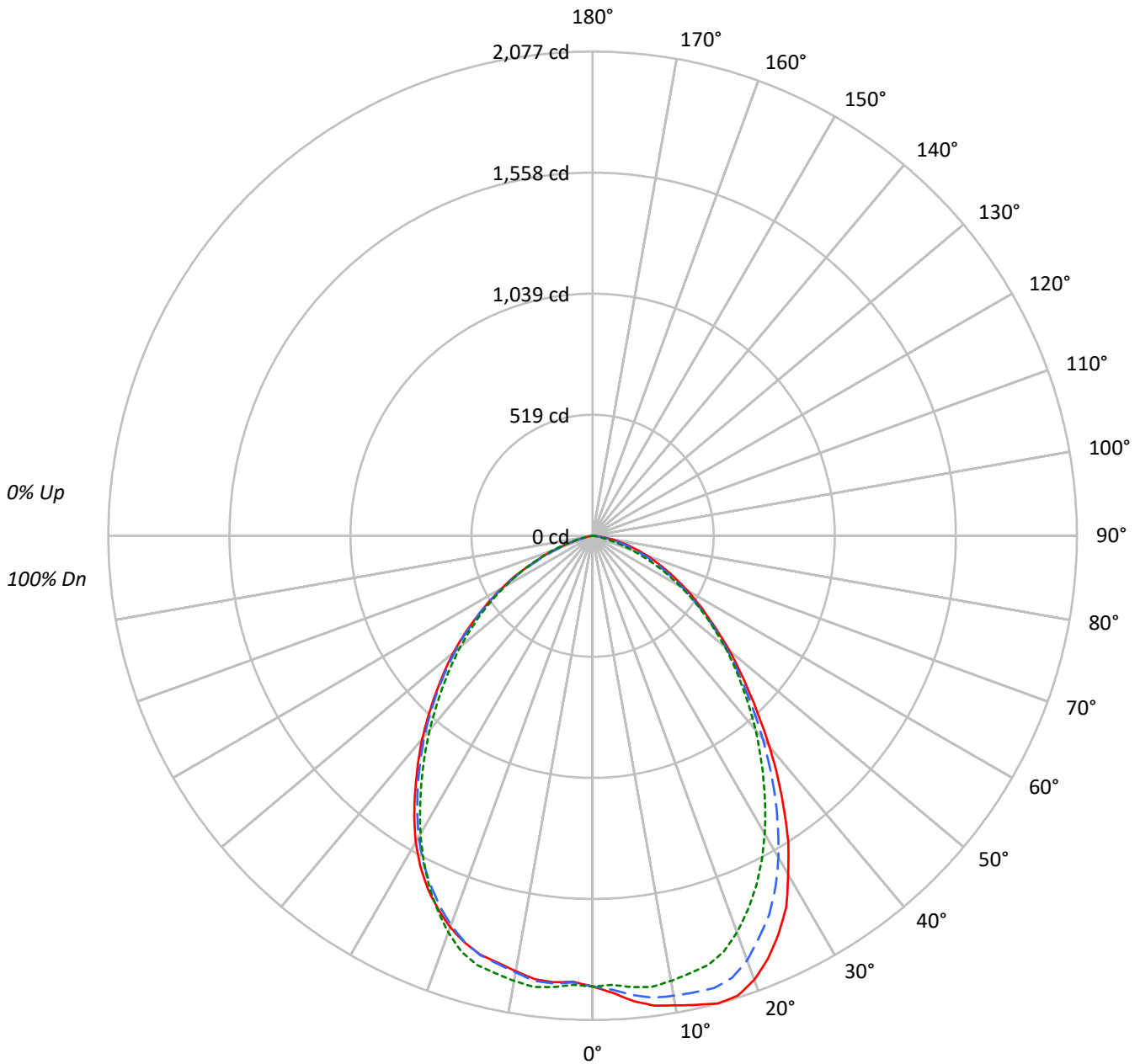
Input Watts (W): 44
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				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	100	100
1	111	107	103	100	108	105	102	99	101	98	96	97	95	93	93	92	90	88	88	88	88
2	102	95	90	85	100	94	88	84	90	86	82	87	83	80	84	81	78	76	76	76	76
3	95	85	78	73	92	84	77	72	81	75	71	78	74	70	76	72	69	67	67	67	67
4	87	77	69	63	85	76	68	63	73	67	62	71	66	61	69	64	60	58	58	58	58
5	81	70	61	56	79	68	61	55	66	60	55	65	59	54	63	58	54	52	52	52	52
6	75	63	55	49	74	62	55	49	61	54	49	59	53	48	58	52	48	46	46	46	46
7	70	58	50	44	69	57	49	44	56	49	44	54	48	44	53	47	43	41	41	41	41
8	66	53	45	40	64	53	45	40	51	44	40	50	44	39	49	43	39	37	37	37	37
9	62	49	42	36	60	49	41	36	47	41	36	46	40	36	45	40	36	34	34	34	34
10	58	46	38	33	57	45	38	33	44	38	33	43	37	33	42	37	33	31	31	31	31

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	238452	238452	238452
5°	248104	240650	238075
10°	256196	242794	237546
15°	265213	243531	237529
20°	266094	237649	234551
25°	256706	225771	227554
30°	238879	210223	216176
35°	215175	192362	199440
40°	189709	174992	182995
45°	165872	157674	165419
50°	146874	141866	149407
55°	129200	125265	130340
60°	115353	106990	110222
65°	101422	86916	85398
70°	88573	64049	58423
75°	73487	38602	31120
80°	55689	14846	9234
85°	25899	3680	3680



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	186.5	4.6
10°-20°	544.2	13.5
20°-30°	788.1	19.6
30°-40°	831.4	20.6
40°-50°	719.6	17.9
50°-60°	533.1	13.2
60°-70°	307.3	7.6
70°-80°	107.3	2.7
80°-90°	11.3	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°	1518.7	37.7
0°-40°	2350.1	58.3
0°-60°	3602.7	89.4
0°-90°	4028.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4028.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1933	1933	1933	1933	1933	
5°	2004	1978	1944	1928	1923	192
15°	2077	2009	1907	1863	1860	584
25°	1886	1792	1659	1648	1672	863
35°	1429	1364	1278	1306	1324	893
45°	951	925	904	938	948	738
55°	601	588	582	604	606	542
65°	348	327	298	282	293	347
75°	154	131	81	65	65	166
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°	1933.2	1933.2	1933.2	1933.2	1933.2	1933.2	1933.2	1933.2	1933.2
2.5°	1961.9	1956.8	1948.9	1938.5	1928.0	1920.2	1917.5	1914.9	1914.9
5°	2003.8	1993.3	1977.6	1956.8	1943.6	1935.8	1928.0	1922.8	1922.8
7.5°	2032.5	2022.1	1998.5	1969.8	1951.5	1935.8	1925.4	1917.5	1917.5
10°	2045.5	2032.5	2003.8	1967.2	1938.5	1917.5	1901.9	1896.6	1896.6
12.5°	2061.2	2045.5	2006.4	1959.3	1922.8	1896.6	1880.9	1875.8	1875.8
15°	2076.9	2058.6	2008.9	1954.1	1907.1	1875.8	1862.7	1860.1	1860.1
17.5°	2069.1	2045.5	1988.1	1922.8	1870.5	1839.2	1826.2	1826.2	1828.7
20°	2027.2	2003.8	1938.5	1865.3	1810.5	1786.9	1776.5	1781.7	1786.9
22.5°	1964.6	1935.8	1865.3	1794.8	1737.3	1716.4	1716.4	1724.2	1732.0
25°	1886.2	1860.1	1792.2	1713.7	1658.9	1643.3	1648.4	1661.6	1672.0
27.5°	1797.3	1768.6	1698.1	1625.0	1570.1	1562.3	1575.3	1593.6	1598.9
30°	1677.2	1653.7	1593.6	1523.1	1476.0	1473.4	1491.7	1504.8	1517.8
32.5°	1562.3	1536.1	1478.7	1410.7	1376.8	1379.4	1400.3	1416.0	1423.8
35°	1429.0	1405.5	1363.7	1308.8	1277.5	1282.7	1306.2	1321.9	1324.5
37.5°	1303.7	1287.9	1246.1	1204.4	1180.8	1191.3	1212.2	1230.5	1230.5
40°	1178.2	1165.2	1133.8	1099.9	1086.8	1099.9	1120.8	1136.5	1136.5
42.5°	1058.0	1050.2	1024.0	1000.6	992.7	1011.0	1029.3	1042.3	1039.8
45°	950.9	943.2	924.9	906.6	903.9	922.2	937.9	945.7	948.3
47.5°	854.3	849.0	833.4	820.3	820.3	838.6	851.7	859.5	862.1
50°	765.4	760.3	747.1	736.7	739.3	757.6	768.1	775.9	778.6
52.5°	676.7	674.0	663.6	650.5	658.4	671.4	684.4	689.7	692.3
55°	600.8	600.8	587.8	577.4	582.5	595.7	603.5	606.1	606.1
57.5°	533.0	530.4	514.7	504.2	506.8	519.9	525.1	527.7	527.7
60°	467.6	465.1	449.4	433.7	433.7	441.5	444.1	446.8	446.8
62.5°	404.9	402.3	384.1	370.9	365.8	363.1	363.1	368.4	378.8
65°	347.5	344.8	326.6	305.6	297.8	290.0	282.2	287.3	292.6
67.5°	295.2	290.0	271.7	253.5	235.2	222.0	209.0	216.9	227.3
70°	245.6	240.3	219.5	198.6	177.6	156.7	146.3	156.7	162.0
72.5°	198.6	193.3	172.5	151.5	125.4	104.5	101.9	104.5	107.2
75°	154.2	151.5	130.6	107.2	81.0	65.3	65.3	65.3	65.3
77.5°	114.9	109.7	88.9	67.9	47.0	36.6	34.0	34.0	34.0
80°	78.4	73.2	54.9	39.2	20.9	15.7	15.7	13.0	13.0
82.5°	44.4	41.9	28.7	15.7	7.9	5.3	5.3	5.3	5.3
85°	18.3	15.7	10.4	5.3	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)