

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: P592831

Luminaire Tested: **HC440D010-HM43040950-41RWWC**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P592831
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: HC440D010-HM43040950-41RWWC
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, SPECULAR TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 5000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3745.1 lumens
Efficiency: N/A
Efficacy: 91.3 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

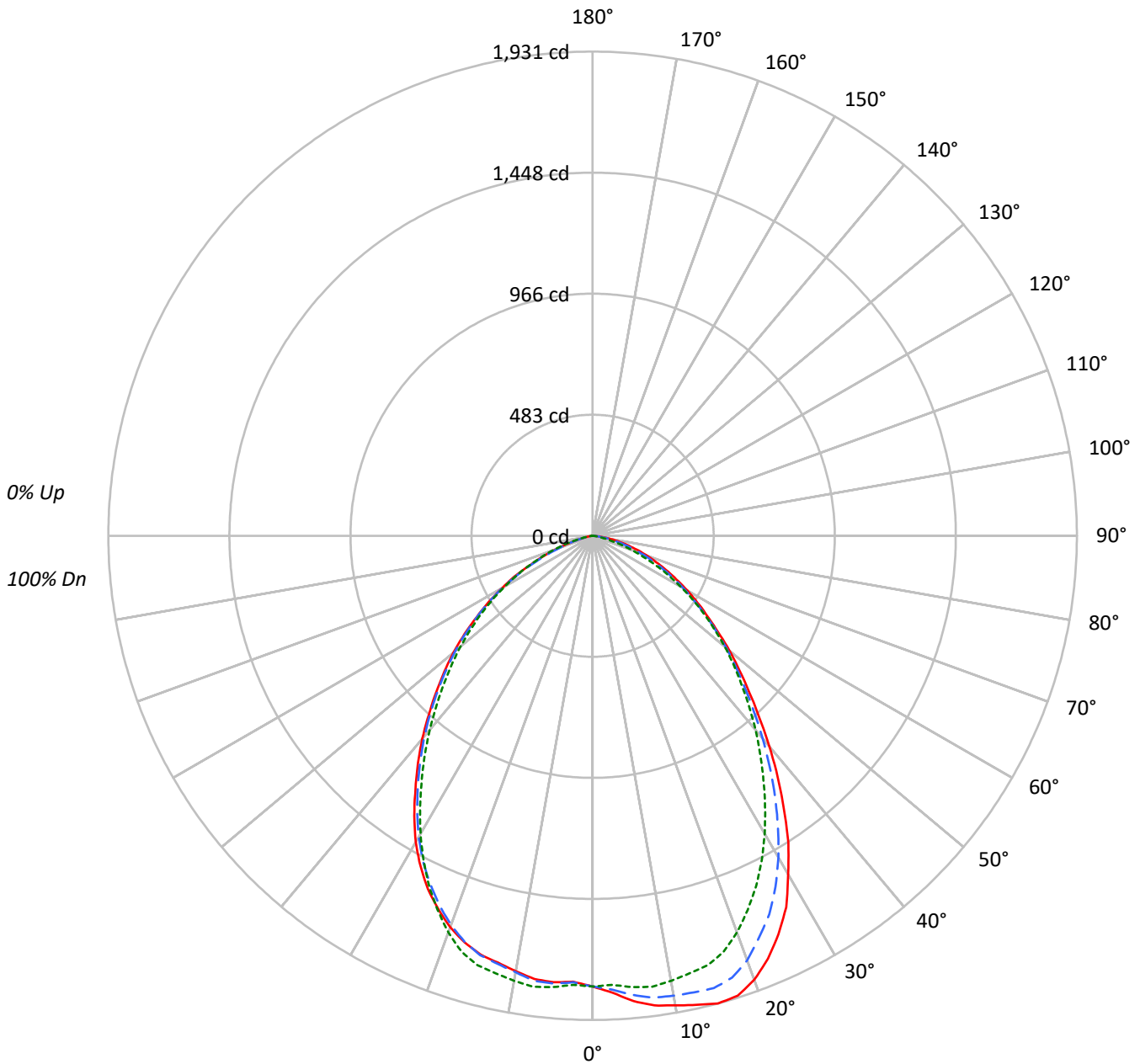
Input Watts (W): 41
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	221677	221677	221677
5°	230646	223725	221310
10°	238172	225698	220838
15°	246544	226394	220801
20°	247376	220927	218052
25°	238646	209889	211535
30°	222073	195439	200965
35°	200042	178825	185406
40°	176361	162691	170098
45°	154202	146579	153784
50°	136550	131887	138872
55°	120125	116469	121157
60°	107237	99441	102451
65°	94271	80816	79386
70°	82298	59541	54312
75°	68293	35886	28976
80°	51782	13780	8595
85°	24059	3538	3538



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	173.3	4.6
10°-20°	505.9	13.5
20°-30°	732.6	19.6
30°-40°	772.9	20.6
40°-50°	668.9	17.9
50°-60°	495.5	13.2
60°-70°	285.6	7.6
70°-80°	99.8	2.7
80°-90°	10.5	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°	1411.8	37.7
0°-40°	2184.7	58.3
0°-60°	3349.2	89.4
0°-90°	3745.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3745.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1797	1797	1797	1797	1797	
5°	1863	1838	1807	1792	1787	179
15°	1931	1868	1773	1732	1729	543
25°	1754	1666	1542	1532	1554	803
35°	1328	1268	1188	1214	1231	830
45°	884	860	840	872	882	686
55°	559	546	542	561	563	504
65°	323	304	277	262	272	323
75°	143	121	75	61	61	154
85°	17	10	2	2	2	26
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°	1797.2	1797.2	1797.2	1797.2	1797.2	1797.2	1797.2	1797.2	1797.2
2.5°	1823.9	1819.0	1811.8	1802.0	1792.4	1785.1	1782.6	1780.1	1780.1
5°	1862.8	1853.0	1838.4	1819.0	1806.9	1799.7	1792.4	1787.4	1787.4
7.5°	1889.4	1879.7	1857.8	1831.2	1814.2	1799.7	1789.9	1782.6	1782.6
10°	1901.6	1889.4	1862.8	1828.8	1802.0	1782.6	1768.0	1763.2	1763.2
12.5°	1916.1	1901.6	1865.1	1821.5	1787.4	1763.2	1748.6	1743.7	1743.7
15°	1930.7	1913.8	1867.6	1816.6	1772.9	1743.7	1731.6	1729.1	1729.1
17.5°	1923.4	1901.6	1848.2	1787.4	1738.9	1709.7	1697.6	1697.6	1700.0
20°	1884.6	1862.8	1802.0	1734.1	1683.1	1661.2	1651.5	1656.3	1661.2
22.5°	1826.3	1799.7	1734.1	1668.5	1615.0	1595.6	1595.6	1602.9	1610.2
25°	1753.5	1729.1	1666.0	1593.2	1542.2	1527.6	1532.4	1544.6	1554.3
27.5°	1670.9	1644.2	1578.6	1510.5	1459.5	1452.3	1464.5	1481.4	1486.3
30°	1559.2	1537.3	1481.4	1415.9	1372.2	1369.7	1386.8	1398.9	1411.0
32.5°	1452.3	1428.0	1374.6	1311.5	1279.8	1282.3	1301.7	1316.3	1323.6
35°	1328.5	1306.6	1267.7	1216.7	1187.6	1192.4	1214.3	1228.8	1231.3
37.5°	1211.9	1197.3	1158.4	1119.5	1097.7	1107.4	1126.8	1143.9	1143.9
40°	1095.3	1083.1	1054.0	1022.5	1010.4	1022.5	1041.9	1056.4	1056.4
42.5°	983.6	976.3	952.1	930.2	922.9	939.8	956.9	969.0	966.6
45°	884.0	876.7	859.7	842.8	840.3	857.3	871.9	879.2	881.6
47.5°	794.1	789.3	774.7	762.6	762.6	779.5	791.8	799.0	801.4
50°	711.6	706.7	694.6	684.8	687.3	704.3	714.0	721.3	723.7
52.5°	629.0	626.5	616.9	604.8	612.0	624.2	636.3	641.1	643.6
55°	558.6	558.6	546.5	536.7	541.6	553.8	561.1	563.4	563.4
57.5°	495.5	493.0	478.4	468.7	471.2	483.3	488.2	490.5	490.5
60°	434.7	432.3	417.7	403.1	403.1	410.4	412.9	415.3	415.3
62.5°	376.4	374.0	357.0	344.8	340.0	337.5	337.5	342.5	352.1
65°	323.0	320.6	303.6	284.2	276.9	269.6	262.3	267.1	272.0
67.5°	274.4	269.6	252.6	235.5	218.6	206.4	194.3	201.6	211.3
70°	228.2	223.4	204.0	184.6	165.1	145.7	136.0	145.7	150.6
72.5°	184.6	179.7	160.3	140.9	116.6	97.2	94.7	97.2	99.5
75°	143.3	140.9	121.4	99.5	75.3	60.8	60.8	60.8	60.8
77.5°	106.8	102.0	82.6	63.1	43.7	34.0	31.6	31.6	31.6
80°	72.9	68.0	51.0	36.4	19.4	14.6	14.6	12.1	12.1
82.5°	41.3	38.9	26.7	14.6	7.3	4.8	4.8	4.8	4.8
85°	17.0	14.6	9.8	4.8	2.5	2.5	2.5	2.5	2.5
87.5°	2.5	2.5	2.5	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)