

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: P580790

Luminaire Tested: **HC445D010-HM44560930-41RWWC**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P580790
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-HM44560930-41RWWC
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, SPECULAR TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3870.2 lumens
Efficiency: N/A
Efficacy: 88.0 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

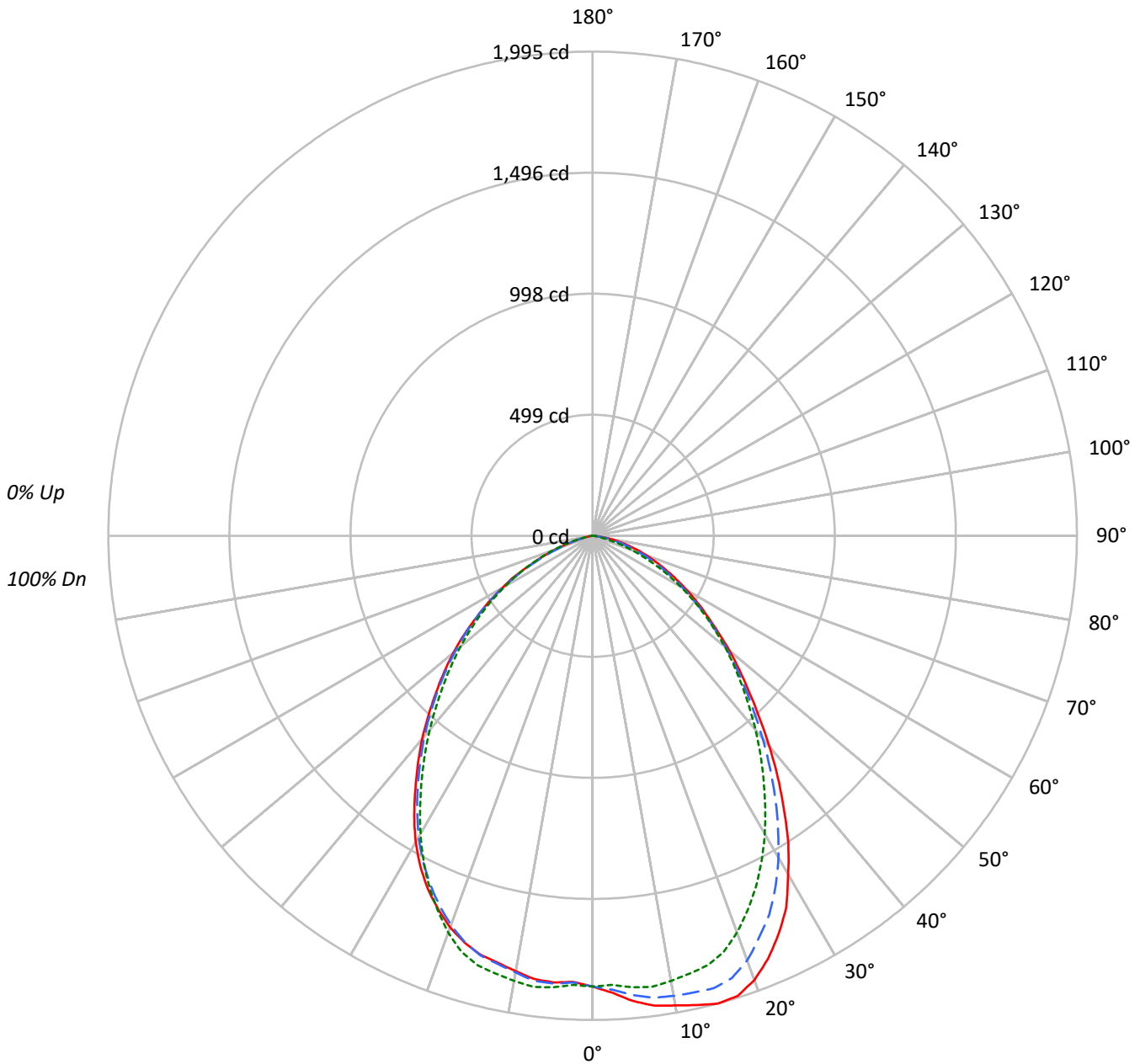
Input Watts (W): 44
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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
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	62	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°	229077	229077	229077
5°	238347	231203	228727
10°	246138	233250	228215
15°	254793	233953	228194
20°	255645	228303	225337
25°	246607	216898	218612
30°	229493	201976	207687
35°	206727	184788	191609
40°	182254	168117	175798
45°	159348	151481	158930
50°	141117	136282	143516
55°	124146	120362	125222
60°	110814	102772	105880
65°	97423	83501	82042
70°	85111	61561	56115
75°	70580	37077	29881
80°	53487	14277	8950
85°	24908	3538	3538



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	179.1	4.6
10°-20°	522.8	13.5
20°-30°	757.1	19.6
30°-40°	798.8	20.6
40°-50°	691.3	17.9
50°-60°	512.1	13.2
60°-70°	295.2	7.6
70°-80°	103.1	2.7
80°-90°	10.8	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°	1459.0	37.7
0°-40°	2257.8	58.3
0°-60°	3461.1	89.4
0°-90°	3870.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3870.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1857	1857	1857	1857	1857	
5°	1925	1900	1867	1852	1847	185
15°	1995	1930	1832	1790	1787	561
25°	1812	1722	1594	1584	1606	829
35°	1373	1310	1227	1255	1272	857
45°	914	888	868	901	911	709
55°	577	565	560	580	582	521
65°	334	314	286	271	281	333
75°	148	125	78	63	63	159
85°	18	10	2	2	2	27
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°	1857.2	1857.2	1857.2	1857.2	1857.2	1857.2	1857.2	1857.2	1857.2
2.5°	1884.8	1879.8	1872.3	1862.3	1852.2	1844.7	1842.2	1839.7	1839.7
5°	1925.0	1915.0	1899.9	1879.8	1867.3	1859.7	1852.2	1847.3	1847.3
7.5°	1952.6	1942.6	1920.0	1892.4	1874.9	1859.7	1849.7	1842.2	1842.2
10°	1965.2	1952.6	1925.0	1889.9	1862.3	1842.2	1827.2	1822.1	1822.1
12.5°	1980.2	1965.2	1927.5	1882.4	1847.3	1822.1	1807.1	1802.0	1802.0
15°	1995.3	1977.7	1930.1	1877.3	1832.1	1802.0	1789.5	1787.0	1787.0
17.5°	1987.7	1965.2	1910.0	1847.3	1797.0	1766.9	1754.4	1754.4	1756.8
20°	1947.6	1925.0	1862.3	1792.1	1739.3	1716.7	1706.7	1711.7	1716.7
22.5°	1887.4	1859.7	1792.1	1724.3	1669.0	1648.9	1648.9	1656.5	1664.0
25°	1812.0	1787.0	1721.7	1646.4	1593.7	1578.7	1583.7	1596.3	1606.3
27.5°	1726.8	1699.2	1631.4	1561.2	1508.4	1500.9	1513.5	1531.0	1536.0
30°	1611.3	1588.8	1531.0	1463.2	1418.1	1415.5	1433.1	1445.7	1458.2
32.5°	1500.9	1475.8	1420.6	1355.3	1322.7	1325.2	1345.3	1360.3	1367.8
35°	1372.9	1350.3	1310.2	1257.4	1227.2	1232.3	1255.0	1270.0	1272.5
37.5°	1252.4	1237.3	1197.2	1157.0	1134.5	1144.4	1164.5	1182.1	1182.1
40°	1131.9	1119.4	1089.2	1056.6	1044.1	1056.6	1076.7	1091.8	1091.8
42.5°	1016.4	1008.9	983.9	961.2	953.7	971.3	988.8	1001.4	998.9
45°	913.5	906.0	888.5	870.9	868.4	885.9	901.0	908.6	911.1
47.5°	820.7	815.7	800.7	788.1	788.1	805.6	818.2	825.7	828.3
50°	735.4	730.3	717.9	707.8	710.2	727.8	737.9	745.5	747.9
52.5°	650.1	647.5	637.5	625.0	632.5	645.0	657.6	662.5	665.1
55°	577.3	577.3	564.7	554.7	559.7	572.2	579.7	582.3	582.3
57.5°	512.0	509.5	494.5	484.4	486.9	499.4	504.5	507.0	507.0
60°	449.2	446.8	431.6	416.6	416.6	424.1	426.7	429.2	429.2
62.5°	389.0	386.5	368.9	356.3	351.4	348.8	348.8	353.9	364.0
65°	333.8	331.3	313.7	293.6	286.1	278.6	271.1	276.1	281.1
67.5°	283.6	278.6	261.0	243.5	225.9	213.3	200.8	208.4	218.3
70°	236.0	230.9	210.8	190.7	170.7	150.6	140.6	150.6	155.6
72.5°	190.7	185.7	165.6	145.5	120.5	100.4	97.8	100.4	102.9
75°	148.1	145.5	125.4	102.9	77.8	62.7	62.7	62.7	62.7
77.5°	110.4	105.5	85.4	65.3	45.2	35.1	32.7	32.7	32.7
80°	75.3	70.2	52.7	37.7	20.1	15.0	15.0	12.6	12.6
82.5°	42.6	40.2	27.6	15.0	7.5	5.0	5.0	5.0	5.0
85°	17.6	15.0	10.0	5.0	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)