

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: P580775

Luminaire Tested: **HC445D010-HM44560927-41WWW**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P580775
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-16)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 9/9/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HC445D010-HM44560927-41WWW
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3507.5 lumens
Efficiency: N/A
Efficacy: 79.7 lumens/watt
Spacing Criteria (0/90/45): 1.06 / 1.03 / 1.1
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

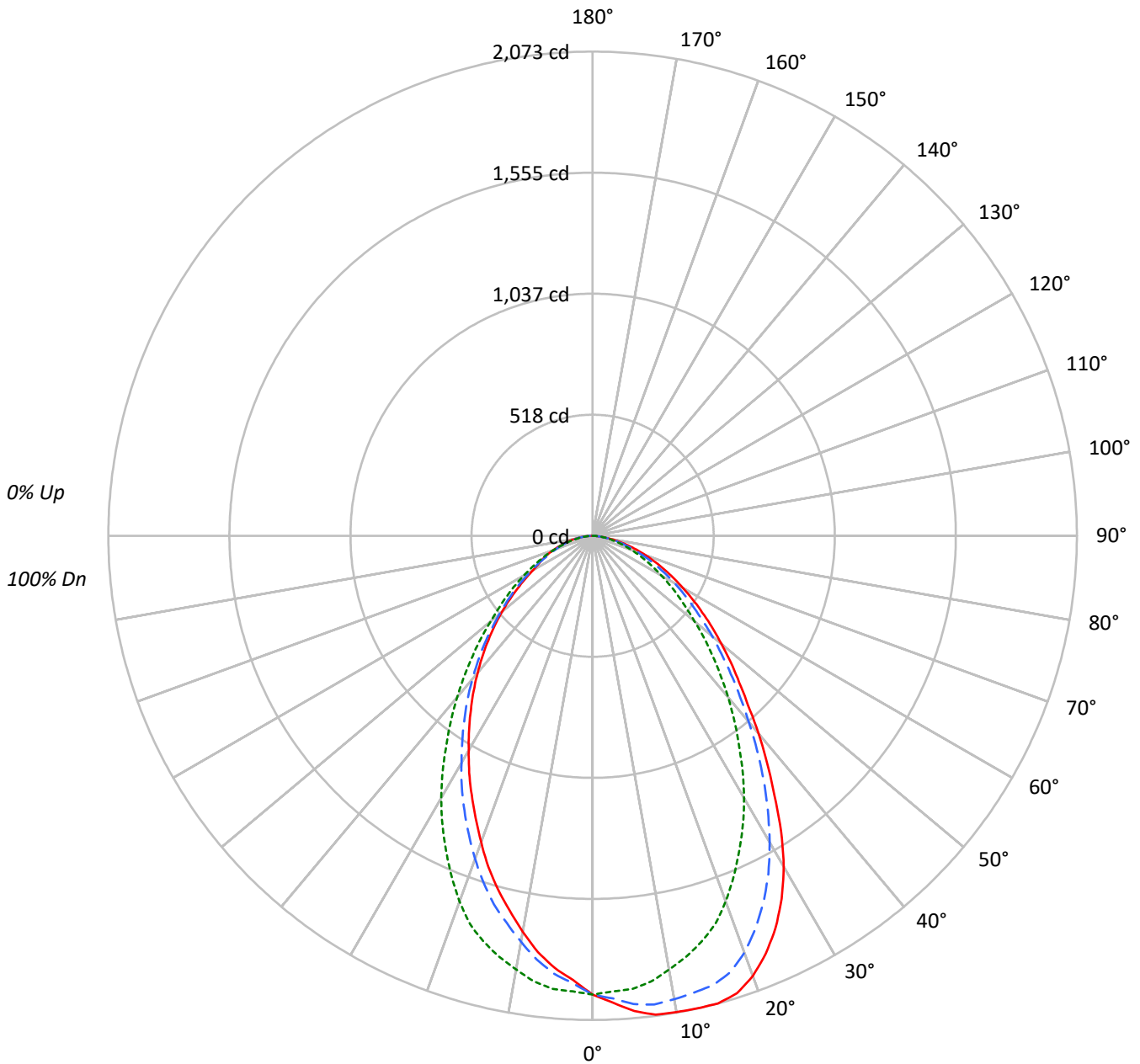
Input Watts (W): 44
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	106	103	100	108	104	101	98	100	97	95	96	94	92	93	91	89	87	87	87	87
2	102	95	89	84	100	93	88	83	90	85	81	87	83	80	84	81	78	76	76	76	76
3	94	85	78	72	92	84	77	72	81	75	71	78	73	69	76	72	68	66	66	66	66
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	62	56	79	69	61	56	67	60	55	65	59	54	63	58	54	52	52	52	52
6	76	64	56	50	74	63	55	50	61	54	49	59	53	49	58	53	48	47	47	47	47
7	71	58	50	45	69	58	50	45	56	49	44	55	49	44	53	48	44	42	42	42	42
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38	38	38	38
9	62	50	42	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35	35	35	35
10	59	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32	32	32	32

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	242263	242263	242263
5°	252921	241183	230027
10°	259314	236156	215615
15°	264677	229854	200050
20°	263272	218695	183202
25°	252215	202213	166678
30°	233011	184643	151058
35°	204243	164235	136739
40°	177842	145108	123161
45°	154778	126572	110035
50°	137893	109071	97097
55°	123222	95911	83997
60°	110024	83776	72404
65°	97773	73520	68792
70°	85832	63328	64158
75°	72677	53948	59476
80°	55760	45958	54197
85°	32692	36088	45712



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	184.1	5.2
10°-20°	507.8	14.5
20°-30°	693.8	19.8
30°-40°	696.7	19.9
40°-50°	576.3	16.4
50°-60°	417.7	11.9
60°-70°	264.6	7.5
70°-80°	133.7	3.8
80°-90°	32.7	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°	1385.8	39.5
0°-40°	2082.5	59.4
0°-60°	3076.5	87.7
0°-90°	3507.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3507.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1964	1964	1964	1964	1964	
5°	2043	2013	1948	1883	1858	196
15°	2073	1992	1800	1634	1567	583
25°	1853	1731	1486	1299	1225	847
35°	1356	1276	1091	957	908	850
45°	887	836	726	654	631	690
55°	573	522	446	407	391	515
65°	335	298	252	226	236	334
75°	152	132	113	118	125	163
85°	23	23	26	30	32	32
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°	1964.1	1964.1	1964.1	1964.1	1964.1	1964.1	1964.1	1964.1	1964.1
2.5°	2001.1	1994.1	1982.6	1968.8	1952.6	1934.1	1917.9	1908.6	1904.0
5°	2042.7	2033.4	2012.6	1982.6	1947.9	1913.2	1883.3	1864.8	1857.8
7.5°	2068.1	2054.3	2024.2	1978.0	1924.8	1874.0	1830.1	1804.6	1797.8
10°	2070.4	2054.3	2015.0	1952.6	1885.5	1818.5	1765.4	1728.4	1721.5
12.5°	2072.7	2051.9	2003.4	1929.5	1846.3	1763.1	1698.4	1654.5	1642.9
15°	2072.7	2051.9	1991.9	1904.0	1800.0	1705.3	1633.6	1582.8	1566.6
17.5°	2054.3	2031.2	1959.5	1857.8	1744.6	1638.3	1555.1	1502.0	1485.8
20°	2005.7	1980.3	1899.4	1788.5	1666.1	1555.1	1472.0	1416.5	1395.7
22.5°	1936.3	1906.4	1820.9	1700.7	1578.2	1465.0	1384.1	1326.3	1307.9
25°	1853.2	1823.1	1730.7	1612.9	1485.8	1379.5	1298.6	1245.5	1224.7
27.5°	1751.6	1719.1	1629.0	1511.2	1393.4	1287.0	1213.1	1164.6	1143.8
30°	1636.0	1601.3	1515.8	1402.6	1296.4	1194.6	1123.0	1083.7	1060.6
32.5°	1502.0	1472.0	1395.7	1294.0	1194.6	1097.5	1037.5	1002.8	984.3
35°	1356.4	1340.2	1275.5	1187.7	1090.7	1009.8	956.6	924.3	908.1
37.5°	1227.0	1210.9	1155.3	1081.4	995.9	921.9	878.1	850.4	836.5
40°	1104.5	1090.7	1037.5	975.1	901.2	836.5	799.5	778.7	764.9
42.5°	984.3	977.5	933.5	875.7	811.1	755.6	725.6	709.4	697.9
45°	887.3	878.1	836.5	781.0	725.6	679.4	653.9	642.3	630.8
47.5°	801.8	790.2	746.4	697.9	647.1	605.4	582.3	570.8	566.2
50°	718.6	707.1	667.8	619.2	568.4	538.4	519.9	508.4	506.0
52.5°	644.7	633.1	589.3	543.0	503.8	478.3	462.2	450.6	446.0
55°	573.0	559.2	522.2	478.3	446.0	422.9	406.7	395.2	390.6
57.5°	508.4	494.5	462.2	420.5	390.6	369.7	355.9	344.3	339.6
60°	446.0	434.4	404.4	365.1	339.6	321.2	307.3	298.1	293.5
62.5°	388.2	379.0	348.9	314.3	293.5	277.2	265.7	256.5	261.1
65°	335.0	325.8	298.1	268.0	251.9	235.7	226.4	226.4	235.7
67.5°	284.2	275.0	251.9	226.4	212.6	201.1	194.1	201.1	208.0
70°	238.0	228.8	208.0	187.1	175.6	166.4	166.4	173.3	177.9
72.5°	194.1	184.9	168.6	152.5	143.3	136.3	143.3	147.9	152.5
75°	152.5	145.5	131.7	120.2	113.2	111.0	117.8	122.5	124.8
77.5°	113.2	108.6	99.4	90.1	85.5	87.9	94.7	97.1	99.4
80°	78.5	76.3	69.3	64.7	64.7	67.0	71.6	73.9	76.3
82.5°	48.5	48.5	43.9	41.6	43.9	48.5	50.8	53.2	53.2
85°	23.1	25.5	23.1	23.1	25.5	30.1	30.1	32.3	32.3
87.5°	7.0	7.0	9.2	9.2	11.6	11.6	11.6	11.6	13.9
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)