

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: P580700

Luminaire Tested: **HC445D010-HM44560827-41RWWC**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P580700
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-HM44560827-41RWWC
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, SPECULAR TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4111.2 lumens
Efficiency: N/A
Efficacy: 93.4 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

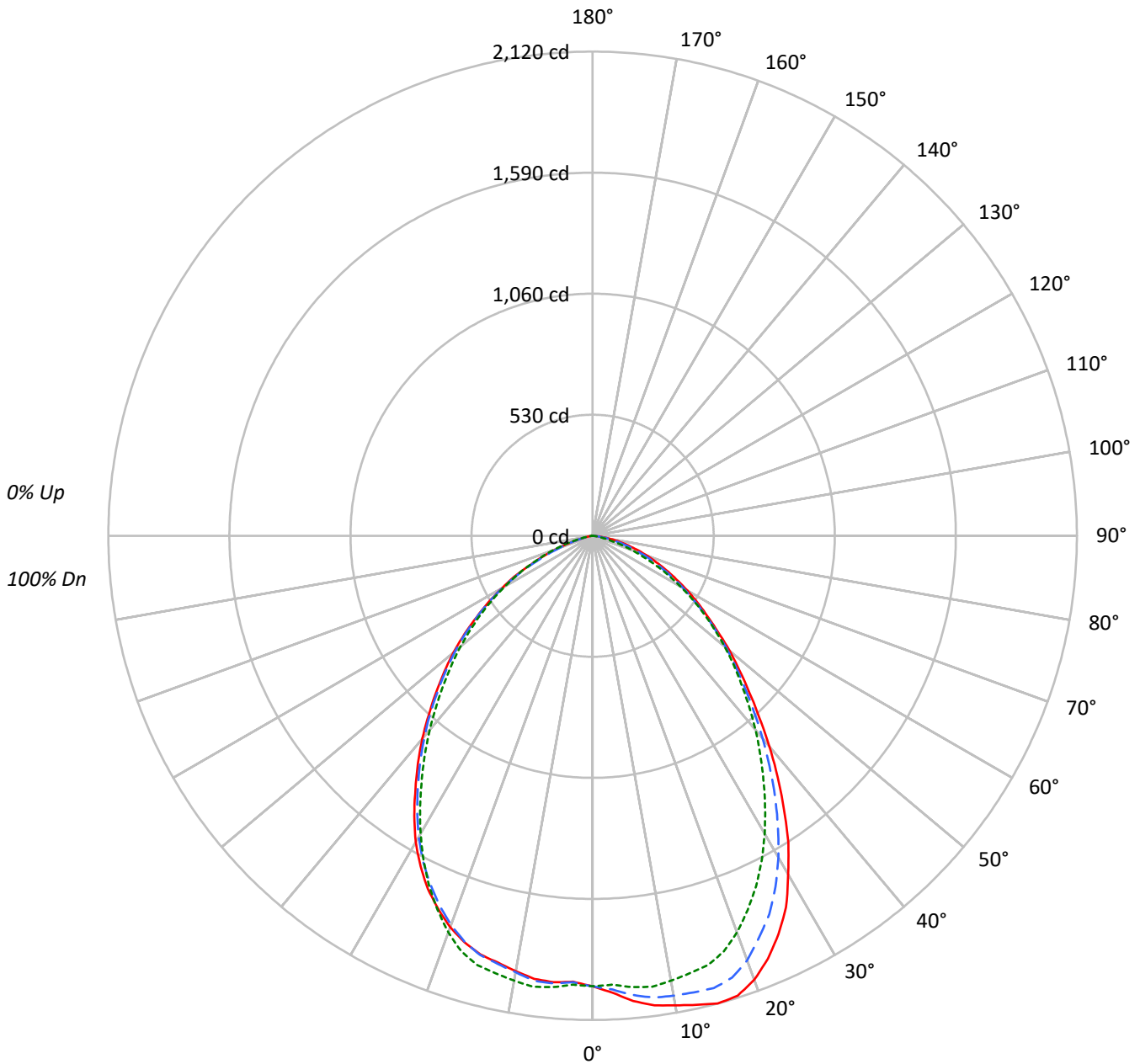
Input Watts (W): 44
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
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°	243349	243349	243349
5°	253181	245603	242966
10°	261456	247766	242431
15°	270666	248523	242394
20°	271567	242519	239369
25°	261973	230412	232208
30°	243779	214538	220620
35°	219602	196308	203535
40°	193606	178583	186731
45°	169274	160918	168803
50°	149887	144782	152458
55°	131867	127845	133028
60°	117721	109161	112467
65°	103494	88696	87150
70°	90412	65384	59614
75°	74965	39412	31740
80°	56826	15130	9518
85°	26323	3821	3821



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	190.3	4.6
10°-20°	555.3	13.5
20°-30°	804.2	19.6
30°-40°	848.5	20.6
40°-50°	734.3	17.9
50°-60°	544.0	13.2
60°-70°	313.6	7.6
70°-80°	109.5	2.7
80°-90°	11.5	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°	1549.8	37.7
0°-40°	2398.3	58.3
0°-60°	3676.6	89.4
0°-90°	4111.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4111.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1973	1973	1973	1973	1973	
5°	2045	2018	1984	1968	1962	196
15°	2120	2050	1946	1901	1898	596
25°	1925	1829	1693	1682	1706	881
35°	1458	1392	1304	1333	1352	911
45°	970	944	922	957	968	753
55°	613	600	594	616	619	553
65°	355	333	304	288	299	354
75°	157	133	83	67	67	169
85°	19	11	3	3	3	29
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°	1972.9	1972.9	1972.9	1972.9	1972.9	1972.9	1972.9	1972.9	1972.9
2.5°	2002.2	1996.8	1988.9	1978.2	1967.5	1959.6	1956.9	1954.2	1954.2
5°	2044.8	2034.2	2018.3	1996.8	1983.6	1975.5	1967.5	1962.3	1962.3
7.5°	2074.2	2063.6	2039.6	2010.2	1991.6	1975.5	1964.8	1956.9	1956.9
10°	2087.5	2074.2	2044.8	2007.6	1978.2	1956.9	1940.9	1935.6	1935.6
12.5°	2103.5	2087.5	2047.5	1999.5	1962.3	1935.6	1919.5	1914.2	1914.2
15°	2119.6	2100.8	2050.2	1994.2	1946.2	1914.2	1900.9	1898.2	1898.2
17.5°	2111.5	2087.5	2028.9	1962.3	1908.9	1876.9	1863.5	1863.5	1866.2
20°	2068.9	2044.8	1978.2	1903.6	1847.6	1823.6	1812.9	1818.2	1823.6
22.5°	2004.9	1975.5	1903.6	1831.6	1773.0	1751.6	1751.6	1759.6	1767.6
25°	1924.9	1898.2	1829.0	1749.0	1693.0	1676.9	1682.3	1695.6	1706.2
27.5°	1834.2	1805.0	1732.9	1658.3	1602.3	1594.2	1607.6	1626.3	1631.6
30°	1711.6	1687.6	1626.3	1554.3	1506.3	1503.7	1522.3	1535.7	1549.0
32.5°	1594.2	1567.7	1509.0	1439.6	1405.0	1407.7	1429.0	1445.0	1453.0
35°	1458.4	1434.4	1391.7	1335.7	1303.7	1309.0	1333.0	1349.0	1351.7
37.5°	1330.4	1314.4	1271.7	1229.0	1205.0	1215.7	1237.0	1255.7	1255.7
40°	1202.4	1189.1	1157.1	1122.4	1109.1	1122.4	1143.8	1159.7	1159.7
42.5°	1079.7	1071.7	1045.1	1021.1	1013.1	1031.8	1050.4	1063.8	1061.1
45°	970.4	962.5	943.8	925.1	922.5	941.1	957.1	965.1	967.7
47.5°	871.8	866.5	850.5	837.1	837.1	855.7	869.1	877.2	879.8
50°	781.1	775.9	762.5	751.9	754.5	773.2	783.8	791.8	794.5
52.5°	690.5	687.9	677.1	663.9	671.9	685.2	698.6	703.8	706.5
55°	613.2	613.2	599.8	589.2	594.5	607.9	615.9	618.6	618.6
57.5°	543.8	541.3	525.2	514.5	517.2	530.6	535.9	538.6	538.6
60°	477.2	474.6	458.6	442.5	442.5	450.6	453.2	455.9	455.9
62.5°	413.2	410.5	391.9	378.6	373.3	370.6	370.6	375.9	386.5
65°	354.6	352.0	333.2	311.9	303.9	296.0	287.9	293.3	298.6
67.5°	301.3	296.0	277.2	258.6	240.0	226.6	213.3	221.3	231.9
70°	250.7	245.3	224.0	202.6	181.3	160.0	149.3	160.0	165.3
72.5°	202.6	197.2	175.9	154.6	128.0	106.6	104.0	106.6	109.3
75°	157.3	154.6	133.3	109.3	82.7	66.6	66.6	66.6	66.6
77.5°	117.4	112.0	90.7	69.3	48.0	37.4	34.7	34.7	34.7
80°	80.0	74.6	56.0	39.9	21.3	16.0	16.0	13.4	13.4
82.5°	45.3	42.6	29.3	16.0	8.0	5.4	5.4	5.4	5.4
85°	18.6	16.0	10.7	5.4	2.7	2.7	2.7	2.7	2.7
87.5°	2.7	2.7	2.7	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)