

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: P580772

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

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P580772
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-HM44560927-41RWWC
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, SPECULAR TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3563.0 lumens
Efficiency: N/A
Efficacy: 81.0 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

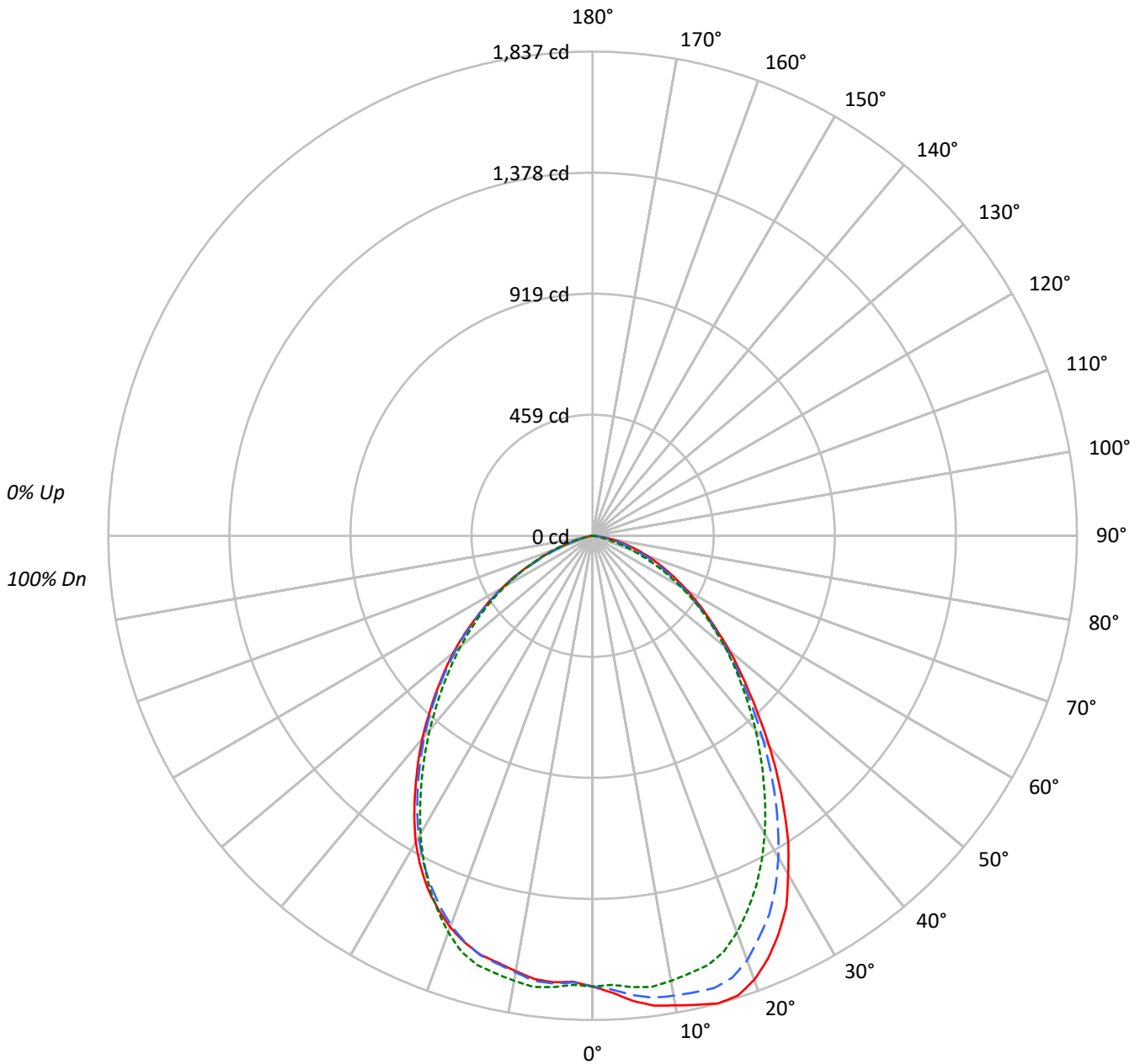
Input Watts (W): 44
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
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°	210896	210896	210896
5°	219428	212841	210550
10°	226587	214726	210104
15°	234553	215386	210074
20°	235352	210176	207446
25°	227037	199681	201260
30°	211277	185925	191209
35°	190299	170137	176401
40°	167779	154769	161837
45°	146719	139445	146300
50°	129911	125478	132137
55°	114276	110792	115286
60°	102032	94606	97468
65°	89689	76876	75504
70°	78331	56656	51679
75°	64957	34122	27546
80°	49225	13141	8240
85°	22927	3397	3397



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	164.9	4.6
10°-20°	481.3	13.5
20°-30°	697.0	19.6
30°-40°	735.3	20.6
40°-50°	636.4	17.9
50°-60°	471.4	13.2
60°-70°	271.7	7.6
70°-80°	94.9	2.7
80°-90°	10.0	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°	1343.2	37.7
0°-40°	2078.5	58.3
0°-60°	3186.3	89.4
0°-90°	3563.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3563.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1710	1710	1710	1710	1710	
5°	1772	1749	1719	1705	1700	170
15°	1837	1777	1687	1647	1645	517
25°	1668	1585	1467	1458	1479	763
35°	1264	1206	1130	1155	1172	789
45°	841	818	799	830	839	653
55°	531	520	515	534	536	479
65°	307	289	263	250	259	307
75°	136	116	72	58	58	147
85°	16	9	2	2	2	25
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°	1709.8	1709.8	1709.8	1709.8	1709.8	1709.8	1709.8	1709.8	1709.8
2.5°	1735.2	1730.6	1723.6	1714.4	1705.2	1698.3	1695.9	1693.7	1693.7
5°	1772.2	1762.9	1749.1	1730.6	1719.0	1712.1	1705.2	1700.5	1700.5
7.5°	1797.6	1788.4	1767.6	1742.1	1726.0	1712.1	1702.9	1695.9	1695.9
10°	1809.1	1797.6	1772.2	1739.9	1714.4	1695.9	1682.1	1677.5	1677.5
12.5°	1823.0	1809.1	1774.4	1732.9	1700.5	1677.5	1663.6	1659.0	1659.0
15°	1836.8	1820.7	1776.8	1728.3	1686.7	1659.0	1647.4	1645.1	1645.1
17.5°	1830.0	1809.1	1758.3	1700.5	1654.4	1626.6	1615.1	1615.1	1617.4
20°	1793.0	1772.2	1714.4	1649.7	1601.2	1580.4	1571.1	1575.7	1580.4
22.5°	1737.5	1712.1	1649.7	1587.3	1536.5	1518.1	1518.1	1524.9	1531.9
25°	1668.2	1645.1	1585.0	1515.7	1467.2	1453.3	1457.9	1469.5	1478.8
27.5°	1589.6	1564.2	1501.8	1437.2	1388.6	1381.7	1393.3	1409.5	1414.1
30°	1483.4	1462.5	1409.5	1347.1	1305.4	1303.1	1319.4	1330.9	1342.5
32.5°	1381.7	1358.6	1307.8	1247.7	1217.7	1220.0	1238.5	1252.3	1259.2
35°	1263.8	1243.1	1206.2	1157.6	1129.9	1134.5	1155.3	1169.1	1171.5
37.5°	1153.0	1139.1	1102.1	1065.1	1044.4	1053.6	1072.1	1088.2	1088.2
40°	1042.0	1030.4	1002.7	972.8	961.2	972.8	991.2	1005.1	1005.1
42.5°	935.7	928.8	905.7	884.9	878.0	894.1	910.4	921.9	919.6
45°	841.1	834.1	817.9	801.8	799.4	815.6	829.5	836.5	838.7
47.5°	755.6	751.0	737.0	725.5	725.5	741.6	753.2	760.2	762.5
50°	677.0	672.4	660.9	651.5	653.9	670.1	679.3	686.2	688.6
52.5°	598.5	596.1	586.9	575.4	582.2	593.8	605.3	610.0	612.3
55°	531.4	531.4	519.8	510.6	515.2	526.8	533.7	536.1	536.1
57.5°	471.4	469.0	455.2	445.9	448.2	459.8	464.4	466.8	466.8
60°	413.6	411.3	397.4	383.5	383.5	390.5	392.8	395.1	395.1
62.5°	358.1	355.8	339.6	328.1	323.5	321.1	321.1	325.8	335.0
65°	307.3	305.0	288.8	270.3	263.4	256.5	249.5	254.1	258.7
67.5°	261.1	256.5	240.3	224.2	207.9	196.4	184.8	191.7	201.1
70°	217.2	212.6	194.1	175.6	157.1	138.7	129.4	138.7	143.3
72.5°	175.6	171.0	152.5	134.0	110.9	92.5	90.1	92.5	94.7
75°	136.3	134.0	115.6	94.7	71.6	57.8	57.8	57.8	57.8
77.5°	101.7	97.1	78.5	60.0	41.6	32.3	30.1	30.1	30.1
80°	69.3	64.7	48.5	34.7	18.5	13.9	13.9	11.6	11.6
82.5°	39.3	36.9	25.5	13.9	7.0	4.6	4.6	4.6	4.6
85°	16.2	13.9	9.2	4.6	2.4	2.4	2.4	2.4	2.4
87.5°	2.4	2.4	2.4	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)