

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: P580646

Luminaire Tested: **HC440D010-HM43040930-41RWWC**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P580646
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-HM43040930-41RWWC
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: 3593.2 lumens
Efficiency: N/A
Efficacy: 87.6 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

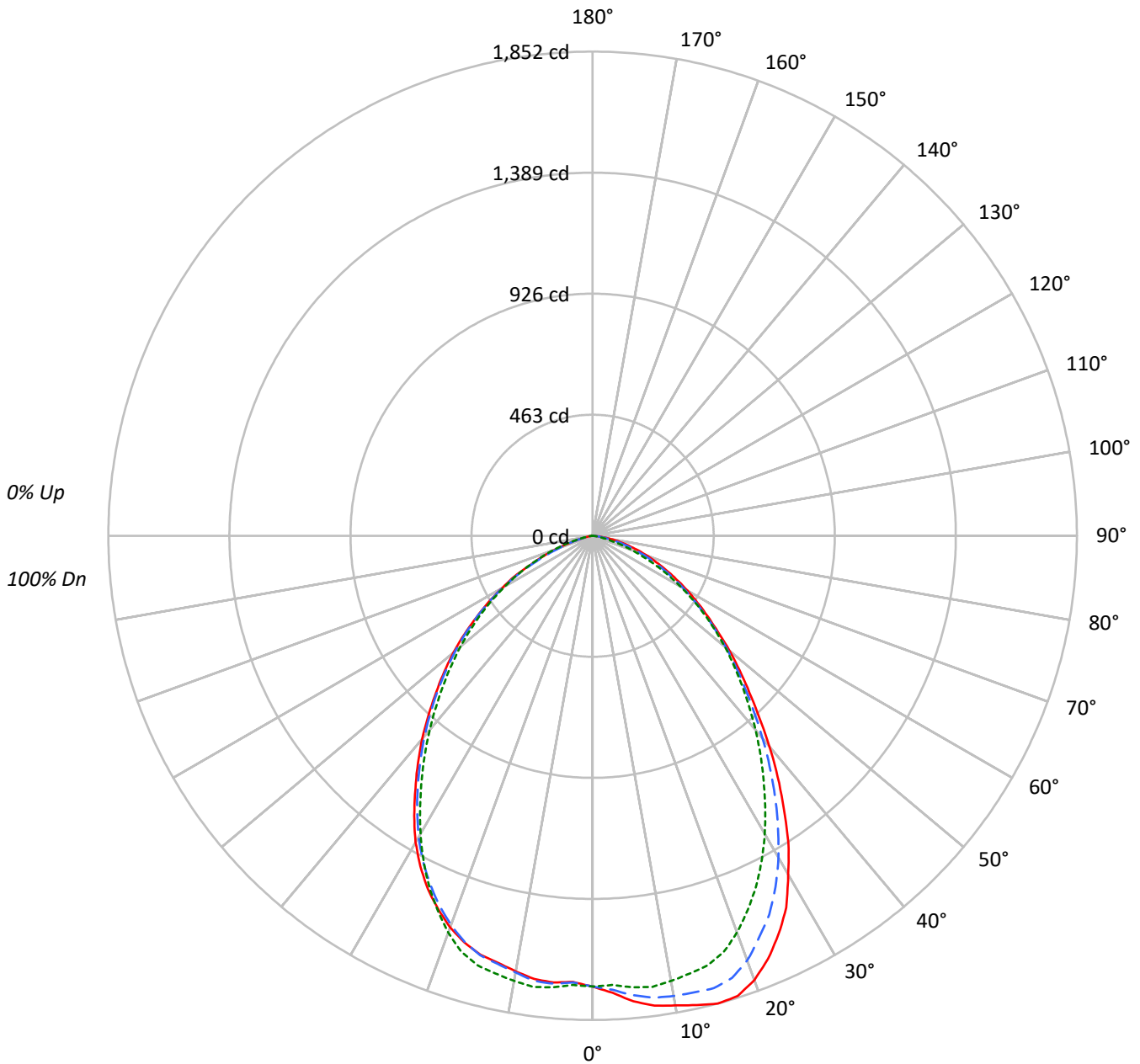
Input Watts (W): 41
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	212673	212673	212673
5°	221285	214649	212333
10°	228503	216542	211870
15°	236558	217212	211849
20°	237347	211961	209192
25°	228956	201369	202961
30°	213057	187505	192818
35°	191926	171568	177877
40°	169196	156073	163206
45°	147940	140631	147539
50°	131004	126533	133230
55°	115265	111738	116233
60°	102895	95396	98282
65°	90477	77547	76176
70°	78980	57125	52112
75°	65481	34408	27784
80°	49722	13212	8311
85°	23210	3397	3397



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	166.3	4.6
10°-20°	485.3	13.5
20°-30°	702.9	19.6
30°-40°	741.6	20.6
40°-50°	641.8	17.9
50°-60°	475.4	13.2
60°-70°	274.1	7.6
70°-80°	95.7	2.7
80°-90°	10.1	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°	1354.5	37.7
0°-40°	2096.1	58.3
0°-60°	3213.3	89.4
0°-90°	3593.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3593.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1724	1724	1724	1724	1724	
5°	1787	1764	1734	1720	1715	172
15°	1852	1792	1701	1661	1659	521
25°	1682	1598	1480	1470	1491	770
35°	1275	1216	1139	1165	1181	796
45°	848	825	806	836	846	658
55°	536	524	520	538	540	483
65°	310	291	266	252	261	310
75°	137	116	72	58	58	148
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°	1724.2	1724.2	1724.2	1724.2	1724.2	1724.2	1724.2	1724.2	1724.2
2.5°	1749.9	1745.3	1738.2	1728.9	1719.6	1712.7	1710.3	1708.0	1708.0
5°	1787.2	1777.9	1763.9	1745.3	1733.6	1726.6	1719.6	1714.9	1714.9
7.5°	1812.8	1803.5	1782.5	1756.8	1740.6	1726.6	1717.3	1710.3	1710.3
10°	1824.4	1812.8	1787.2	1754.6	1728.9	1710.3	1696.3	1691.6	1691.6
12.5°	1838.4	1824.4	1789.5	1747.5	1714.9	1691.6	1677.7	1673.0	1673.0
15°	1852.5	1836.1	1791.8	1742.9	1701.0	1673.0	1661.3	1659.0	1659.0
17.5°	1845.4	1824.4	1773.2	1714.9	1668.4	1640.4	1628.7	1628.7	1631.1
20°	1808.2	1787.2	1728.9	1663.7	1614.8	1593.7	1584.4	1589.1	1593.7
22.5°	1752.2	1726.6	1663.7	1600.8	1549.6	1530.8	1530.8	1537.9	1544.9
25°	1682.3	1659.0	1598.4	1528.5	1479.6	1465.6	1470.3	1482.0	1491.3
27.5°	1603.1	1577.5	1514.6	1449.3	1400.4	1393.4	1405.1	1421.3	1426.0
30°	1495.9	1474.9	1421.3	1358.4	1316.5	1314.1	1330.5	1342.2	1353.8
32.5°	1393.4	1370.1	1318.9	1258.2	1227.9	1230.3	1248.9	1262.9	1269.9
35°	1274.6	1253.6	1216.3	1167.4	1139.4	1144.1	1165.1	1179.1	1181.3
37.5°	1162.7	1148.7	1111.5	1074.1	1053.2	1062.5	1081.2	1097.5	1097.5
40°	1050.8	1039.2	1011.3	981.0	969.3	981.0	999.6	1013.6	1013.6
42.5°	943.7	936.7	913.4	892.4	885.5	901.7	918.1	929.8	927.4
45°	848.1	841.2	824.8	808.6	806.2	822.5	836.5	843.4	845.8
47.5°	761.9	757.2	743.3	731.7	731.7	747.9	759.6	766.7	768.9
50°	682.7	678.1	666.4	657.1	659.4	675.7	685.0	692.0	694.3
52.5°	603.5	601.2	591.9	580.2	587.2	598.8	610.5	615.1	617.4
55°	536.0	536.0	524.3	515.0	519.6	531.2	538.3	540.5	540.5
57.5°	475.3	473.1	459.0	449.7	452.0	463.6	468.4	470.7	470.7
60°	417.1	414.8	400.8	386.7	386.7	393.8	396.2	398.4	398.4
62.5°	361.2	358.8	342.6	330.9	326.2	323.9	323.9	328.6	337.9
65°	310.0	307.6	291.2	272.6	265.7	258.6	251.7	256.3	261.0
67.5°	263.3	258.6	242.4	226.0	209.7	198.1	186.4	193.4	202.7
70°	219.0	214.3	195.7	177.1	158.4	139.8	130.5	139.8	144.5
72.5°	177.1	172.4	153.8	135.2	111.9	93.2	90.9	93.2	95.5
75°	137.4	135.2	116.5	95.5	72.2	58.3	58.3	58.3	58.3
77.5°	102.6	97.9	79.3	60.5	41.9	32.6	30.3	30.3	30.3
80°	70.0	65.2	49.0	35.0	18.6	14.0	14.0	11.7	11.7
82.5°	39.6	37.3	25.7	14.0	7.0	4.7	4.7	4.7	4.7
85°	16.4	14.0	9.3	4.7	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)