

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: P580574

Luminaire Tested: **HC440D010-HM43040830-41RWWC**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P580574
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-HM43040830-41RWWC
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, SPECULAR TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4191.5 lumens
Efficiency: N/A
Efficacy: 102.2 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

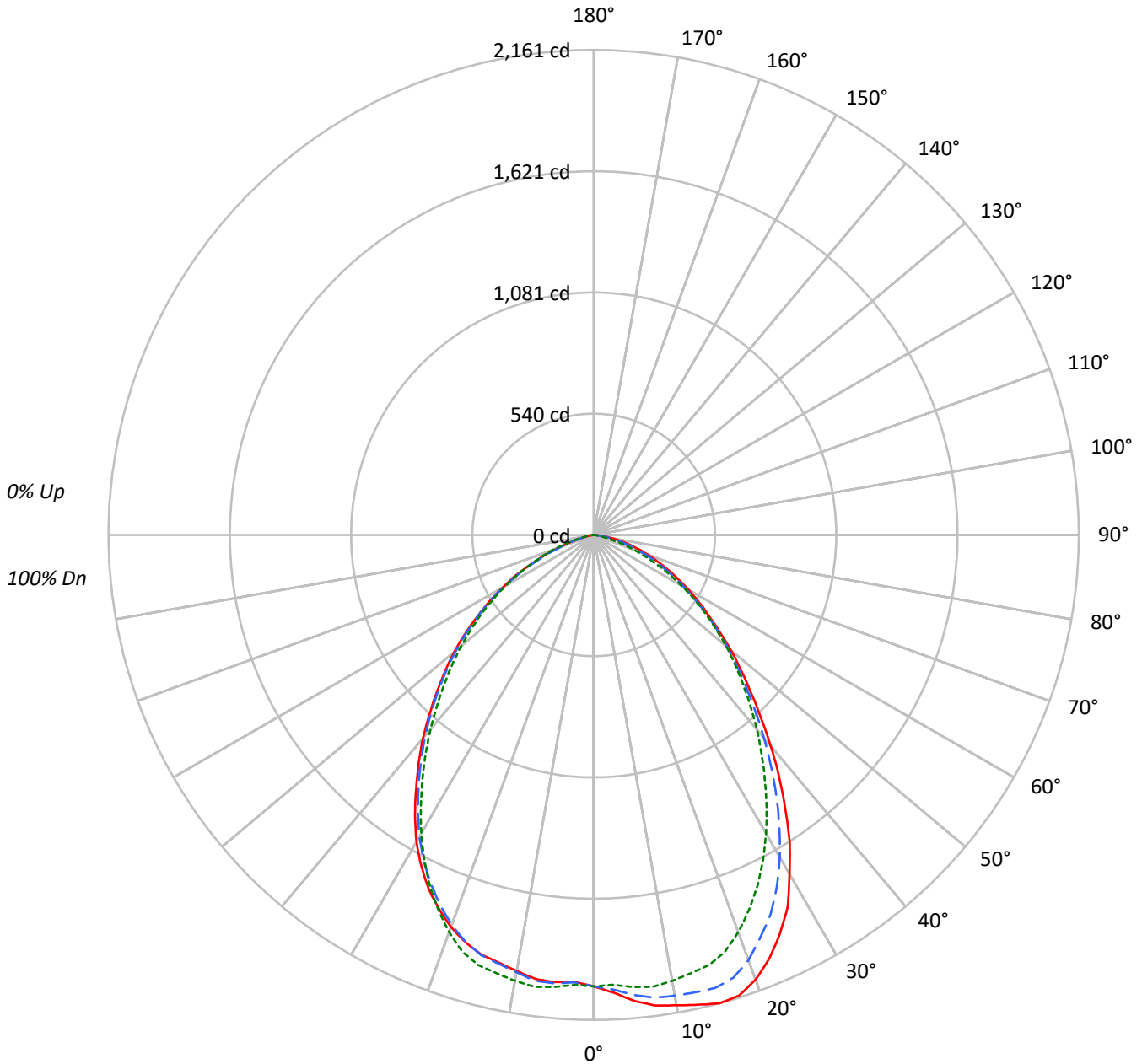
Input Watts (W): 41
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	62	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°	248097	248097	248097
5°	258133	250395	247695
10°	266566	252614	247165
15°	275953	253389	247132
20°	276870	247258	244042
25°	267090	234903	236754
30°	248550	218740	224935
35°	223878	200147	207495
40°	197390	182077	190386
45°	172588	164058	172117
50°	152842	147603	155432
55°	134447	130340	135608
60°	120015	111307	114662
65°	105508	90418	88872
70°	92143	66682	60768
75°	76442	40175	32359
80°	57891	15414	9660
85°	27031	3821	3821



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	194.0	4.6
10°-20°	566.2	13.5
20°-30°	819.9	19.6
30°-40°	865.1	20.6
40°-50°	748.7	17.9
50°-60°	554.6	13.2
60°-70°	319.7	7.6
70°-80°	111.6	2.7
80°-90°	11.7	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°	1580.1	37.7
0°-40°	2445.2	58.3
0°-60°	3748.4	89.4
0°-90°	4191.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4191.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2011	2011	2011	2011	2011	
5°	2085	2058	2022	2006	2000	200
15°	2161	2090	1984	1938	1935	608
25°	1962	1865	1726	1715	1740	898
35°	1487	1419	1329	1359	1378	929
45°	989	962	940	976	987	768
55°	625	612	606	628	631	564
65°	362	340	310	294	304	361
75°	160	136	84	68	68	173
85°	19	11	3	3	3	30
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°	2011.4	2011.4	2011.4	2011.4	2011.4	2011.4	2011.4	2011.4	2011.4
2.5°	2041.3	2035.8	2027.8	2016.9	2006.0	1997.8	1995.2	1992.4	1992.4
5°	2084.8	2074.0	2057.6	2035.8	2022.3	2014.1	2006.0	2000.5	2000.5
7.5°	2114.8	2103.9	2079.3	2049.5	2030.5	2014.1	2003.2	1995.2	1995.2
10°	2128.3	2114.8	2084.8	2046.7	2016.9	1995.2	1978.8	1973.4	1973.4
12.5°	2144.6	2128.3	2087.5	2038.7	2000.5	1973.4	1957.0	1951.7	1951.7
15°	2161.0	2141.9	2090.2	2033.2	1984.3	1951.7	1938.0	1935.3	1935.3
17.5°	2152.8	2128.3	2068.5	2000.5	1946.2	1913.5	1900.0	1900.0	1902.7
20°	2109.3	2084.8	2016.9	1940.8	1883.7	1859.2	1848.3	1853.8	1859.2
22.5°	2044.0	2014.1	1940.8	1867.4	1807.6	1785.9	1785.9	1793.9	1802.1
25°	1962.5	1935.3	1864.7	1783.1	1726.0	1709.7	1715.1	1728.7	1739.6
27.5°	1870.1	1840.2	1766.8	1690.7	1633.6	1625.4	1639.0	1658.1	1663.5
30°	1745.1	1720.6	1658.1	1584.6	1535.8	1533.1	1552.0	1565.7	1579.3
32.5°	1625.4	1598.3	1538.5	1467.8	1432.4	1435.2	1457.0	1473.2	1481.4
35°	1486.8	1462.3	1418.8	1361.8	1329.2	1334.7	1359.1	1375.4	1378.0
37.5°	1356.3	1340.0	1296.5	1253.1	1228.6	1239.5	1261.2	1280.3	1280.3
40°	1225.9	1212.2	1179.6	1144.3	1130.8	1144.3	1166.1	1182.4	1182.4
42.5°	1100.8	1092.6	1065.5	1041.1	1032.9	1051.9	1071.0	1084.6	1081.8
45°	989.4	981.2	962.3	943.2	940.5	959.5	975.8	984.0	986.7
47.5°	888.8	883.3	867.1	853.5	853.5	872.5	886.2	894.2	897.0
50°	796.5	791.0	777.4	766.5	769.2	788.3	799.2	807.3	810.0
52.5°	704.0	701.3	690.4	676.9	684.9	698.6	712.2	717.6	720.4
55°	625.2	625.2	611.6	600.7	606.1	619.7	627.9	630.6	630.6
57.5°	554.4	551.8	535.5	524.6	527.3	540.9	546.4	549.1	549.1
60°	486.5	483.8	467.6	451.2	451.2	459.4	462.1	464.8	464.8
62.5°	421.3	418.6	399.5	386.0	380.6	377.8	377.8	383.3	394.1
65°	361.5	358.8	339.8	318.0	309.8	301.7	293.6	299.0	304.5
67.5°	307.2	301.7	282.7	263.7	244.6	231.0	217.5	225.7	236.5
70°	255.5	250.1	228.3	206.6	184.9	163.1	152.2	163.1	168.5
72.5°	206.6	201.1	179.4	157.6	130.5	108.7	106.0	108.7	111.4
75°	160.4	157.6	135.9	111.4	84.3	67.9	67.9	67.9	67.9
77.5°	119.6	114.1	92.4	70.6	48.9	38.0	35.3	35.3	35.3
80°	81.5	76.1	57.1	40.8	21.7	16.3	16.3	13.6	13.6
82.5°	46.2	43.5	29.9	16.3	8.2	5.4	5.4	5.4	5.4
85°	19.1	16.3	10.9	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)