

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: P580593

Luminaire Tested: **HC440D010-HM43040835-41RWWH**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P580593
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-15)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 9/9/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HC440D010-HM43040835-41RWWH
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4181.7 lumens
Efficiency: N/A
Efficacy: 102.0 lumens/watt
Spacing Criteria (0/90/45): 1.14 / 1.08 / 1.16
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

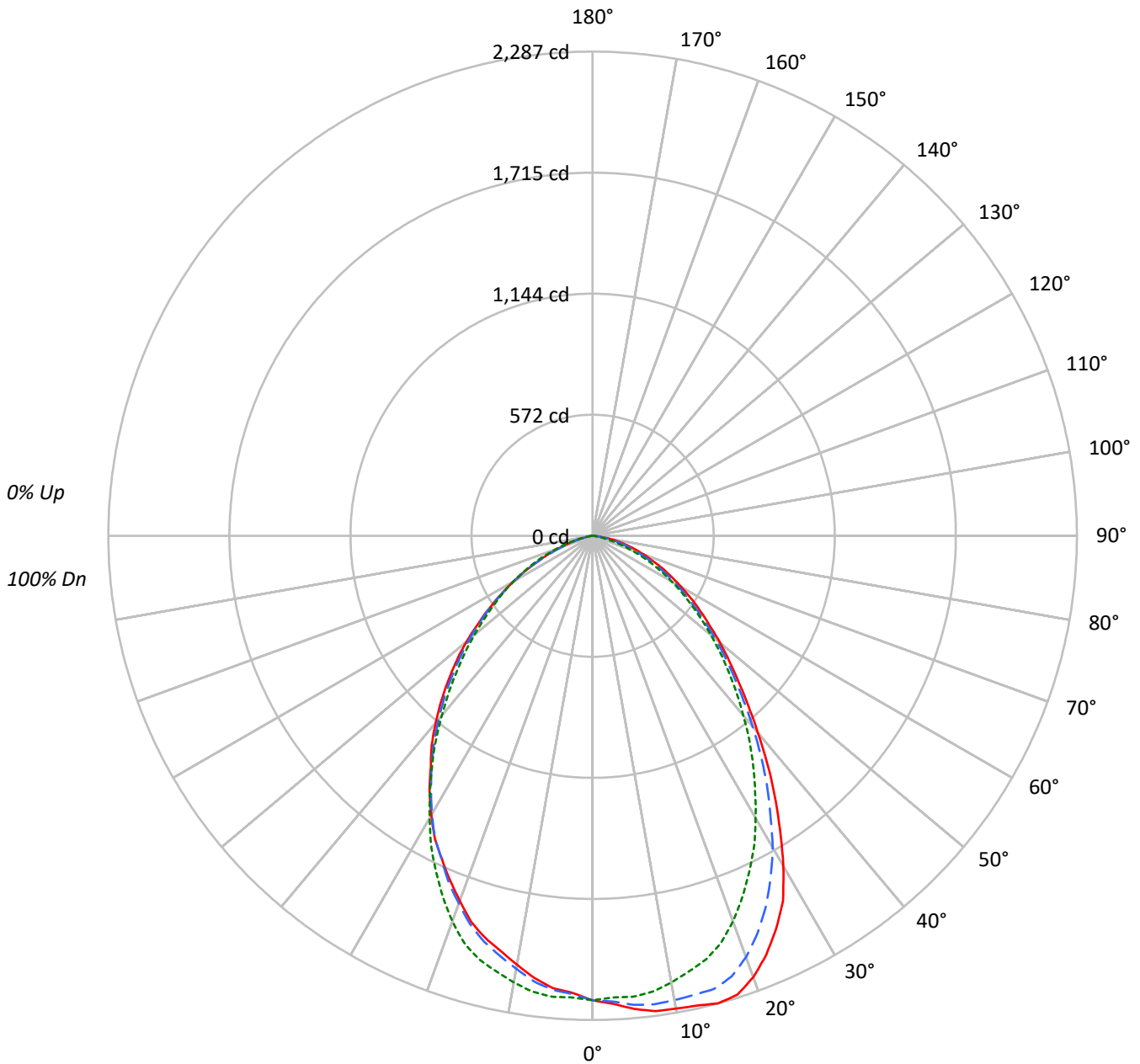
Input Watts (W): 41
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	104	100	108	105	102	99	101	98	96	97	95	93	93	92	90	88																			
2	103	96	90	85	100	94	89	84	90	86	82	87	84	80	84	81	79	77																			
3	95	86	79	73	92	84	78	73	81	76	71	79	74	70	76	72	69	67																			
4	88	77	70	64	86	76	69	63	74	67	62	71	66	62	69	65	61	59																			
5	81	70	62	56	79	69	61	56	67	60	55	65	59	55	63	58	54	52																			
6	76	64	56	50	74	63	55	50	61	54	49	60	54	49	58	53	49	47																			
7	71	58	51	45	69	58	50	45	56	49	45	55	49	44	54	48	44	42																			
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38																			
9	62	50	42	37	61	49	42	37	48	41	37	47	41	37	46	41	37	35																			
10	58	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	270608	270608	270608
5°	277721	270626	265575
10°	284013	268295	257724
15°	291991	264498	250924
20°	291204	254359	240760
25°	278930	238129	229228
30°	256568	219309	217002
35°	225715	199033	200689
40°	195281	178165	185620
45°	169710	158319	167808
50°	150616	139620	149042
55°	133630	122491	127759
60°	119004	106225	106225
65°	105799	88317	82713
70°	91422	66826	59000
75°	76633	44178	36362
80°	58033	21239	19321
85°	30711	7784	7784



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	207.8	5.0
10°-20°	589.0	14.1
20°-30°	830.7	19.9
30°-40°	858.2	20.5
40°-50°	727.5	17.4
50°-60°	529.3	12.7
60°-70°	309.3	7.4
70°-80°	114.9	2.7
80°-90°	15.1	0.4
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°	1627.5	38.9
0°-40°	2485.7	59.4
0°-60°	3742.5	89.5
0°-90°	4181.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4181.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2194	2194	2194	2194	2194	
5°	2243	2224	2186	2153	2145	215
15°	2287	2216	2071	1984	1965	643
25°	2050	1935	1750	1687	1684	937
35°	1499	1434	1322	1325	1333	936
45°	973	946	908	940	962	757
55°	621	591	570	589	594	559
65°	362	332	303	283	283	360
75°	161	134	93	74	76	173
85°	22	14	6	6	6	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°	2193.9	2193.9	2193.9	2193.9	2193.9	2193.9	2193.9	2193.9	2193.9
2.5°	2213.1	2207.6	2202.1	2193.9	2183.0	2174.9	2166.7	2161.3	2161.3
5°	2243.0	2234.8	2224.0	2204.9	2185.7	2169.5	2153.1	2144.9	2144.9
7.5°	2264.8	2253.9	2232.1	2204.9	2172.2	2147.6	2123.1	2112.2	2106.7
10°	2267.6	2256.6	2226.6	2185.7	2142.1	2104.0	2076.8	2060.4	2057.7
12.5°	2272.9	2259.4	2221.1	2164.0	2106.7	2060.4	2030.5	2014.1	2008.6
15°	2286.6	2267.6	2215.8	2142.1	2071.3	2016.8	1984.1	1970.5	1965.0
17.5°	2272.9	2245.7	2183.0	2095.8	2016.8	1956.8	1924.1	1910.5	1910.5
20°	2218.5	2191.2	2117.7	2022.3	1937.8	1880.5	1847.9	1839.7	1834.2
22.5°	2142.1	2112.2	2033.2	1932.3	1847.9	1796.1	1774.2	1763.3	1760.6
25°	2049.5	2019.5	1935.1	1831.5	1749.7	1706.0	1687.0	1687.0	1684.3
27.5°	1945.9	1907.8	1820.6	1730.6	1651.6	1618.8	1610.8	1610.8	1613.5
30°	1801.4	1774.2	1700.7	1613.5	1539.8	1518.1	1518.1	1523.6	1523.6
32.5°	1646.2	1627.0	1561.7	1485.3	1428.2	1414.5	1420.0	1430.8	1433.5
35°	1499.0	1477.1	1433.5	1365.4	1321.8	1316.4	1324.6	1332.8	1332.8
37.5°	1354.5	1332.8	1302.7	1248.2	1215.5	1218.3	1229.2	1240.1	1248.2
40°	1212.8	1196.4	1174.7	1131.1	1106.5	1117.4	1131.1	1142.0	1152.8
42.5°	1087.5	1071.1	1054.7	1022.0	1005.6	1019.3	1035.7	1046.6	1057.4
45°	972.9	962.0	945.7	918.4	907.6	921.2	940.3	951.2	962.0
47.5°	874.8	869.4	847.6	823.0	817.7	831.2	847.6	861.3	869.4
50°	784.9	776.7	757.7	733.1	727.6	749.5	760.4	768.6	776.7
52.5°	697.7	689.5	667.7	645.9	645.9	662.3	670.5	673.2	681.3
55°	621.4	613.2	591.4	575.1	569.6	583.3	588.6	588.6	594.1
57.5°	550.5	542.3	520.6	501.4	498.7	506.9	506.9	506.9	509.6
60°	482.4	474.2	452.4	436.1	430.6	433.4	430.6	427.9	430.6
62.5°	419.7	411.5	389.8	370.6	365.2	365.2	357.0	354.3	357.0
65°	362.5	348.9	332.5	313.4	302.6	294.4	283.4	283.4	283.4
67.5°	305.2	294.4	275.3	256.1	242.6	228.9	212.5	218.0	220.7
70°	253.5	245.3	223.5	204.4	185.3	168.9	155.4	160.8	163.6
72.5°	207.2	196.2	177.1	155.4	139.0	117.1	109.0	114.5	114.5
75°	160.8	149.9	133.5	111.8	92.7	73.5	73.5	76.3	76.3
77.5°	119.9	109.0	92.7	73.5	57.3	43.6	46.3	46.3	46.3
80°	81.7	73.5	60.0	43.6	29.9	24.5	24.5	24.5	27.2
82.5°	46.3	40.9	32.7	21.7	13.7	13.7	13.7	13.7	13.7
85°	21.7	16.4	13.7	8.2	5.5	5.5	5.5	5.5	5.5
87.5°	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
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)