

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: P580665

Luminaire Tested: **HC440D010-HM43040935-41RWWH**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P580665
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-HM43040935-41RWWH
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3728.3 lumens
Efficiency: N/A
Efficacy: 90.9 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

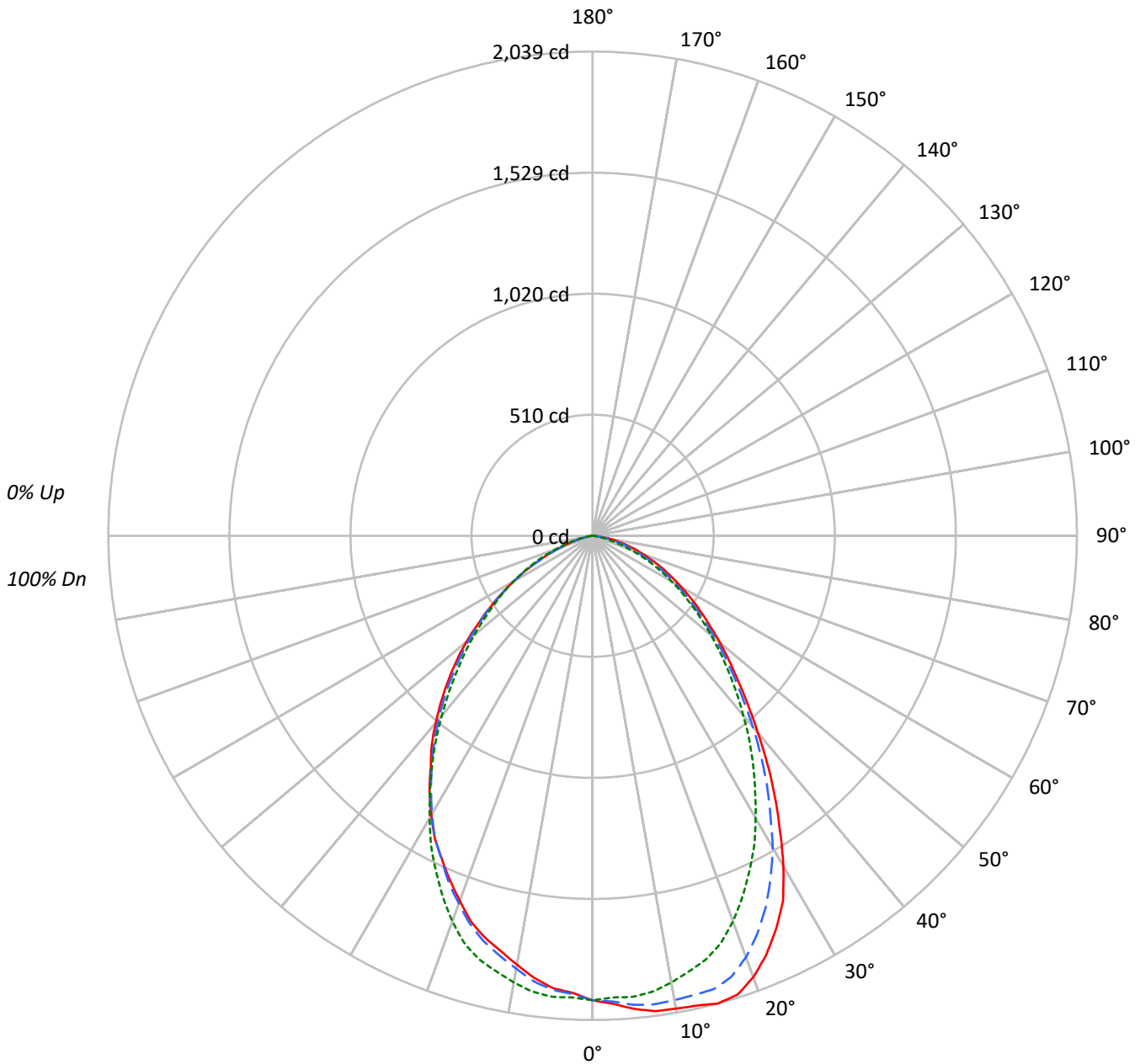
Input Watts (W): 41
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20				
RC	80				70				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	100	100
1	111	107	104	100	108	105	102	99	101	98	96	97	95	93	93	92	90	88	88	88	88
2	103	96	90	85	100	94	89	84	90	86	82	87	84	80	84	81	79	77	77	77	77
3	95	86	79	73	92	84	78	73	81	76	71	79	74	70	76	72	69	67	67	67	67
4	88	77	70	64	86	76	69	63	74	67	62	71	66	62	69	65	61	59	59	59	59
5	81	70	62	56	79	69	61	56	67	60	55	65	59	55	63	58	54	52	52	52	52
6	76	64	56	50	74	63	55	50	61	54	49	60	54	49	58	53	49	47	47	47	47
7	71	58	51	45	69	58	50	45	56	49	45	55	49	44	54	48	44	42	42	42	42
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38	38	38	38
9	62	50	42	37	61	49	42	37	48	41	37	47	41	37	46	41	37	35	35	35	35
10	58	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32	32	32	32

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	241264	241264	241264
5°	247609	241282	236775
10°	253202	239199	229768
15°	260335	235818	223712
20°	259622	226781	214652
25°	248676	212311	204377
30°	228767	195538	193459
35°	201246	177455	178931
40°	174107	158843	165493
45°	151307	141137	149632
50°	134286	124480	132904
55°	119136	109201	113910
60°	106102	94705	94705
65°	94329	78715	73753
70°	81504	59577	52581
75°	68340	39365	32407
80°	51782	18966	17261
85°	27456	6793	6793



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	185.2	5.0
10°-20°	525.2	14.1
20°-30°	740.6	19.9
30°-40°	765.1	20.5
40°-50°	648.6	17.4
50°-60°	471.9	12.7
60°-70°	275.8	7.4
70°-80°	102.5	2.7
80°-90°	13.4	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°	1451.0	38.9
0°-40°	2216.2	59.4
0°-60°	3336.7	89.5
0°-90°	3728.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3728.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1956	1956	1956	1956	1956	
5°	2000	1983	1949	1920	1912	192
15°	2039	1976	1847	1769	1752	573
25°	1827	1725	1560	1504	1502	836
35°	1336	1278	1178	1181	1188	835
45°	867	843	809	838	858	675
55°	554	527	508	525	530	498
65°	323	296	270	253	253	321
75°	143	119	83	66	68	154
85°	19	12	5	5	5	27
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°	1956.0	1956.0	1956.0	1956.0	1956.0	1956.0	1956.0	1956.0	1956.0
2.5°	1973.1	1968.3	1963.3	1956.0	1946.3	1939.0	1931.7	1926.9	1926.9
5°	1999.8	1992.5	1982.8	1965.8	1948.7	1934.2	1919.6	1912.3	1912.3
7.5°	2019.3	2009.5	1990.1	1965.8	1936.6	1914.8	1892.9	1883.2	1878.2
10°	2021.6	2012.0	1985.2	1948.7	1909.8	1875.9	1851.6	1837.0	1834.5
12.5°	2026.5	2014.3	1980.4	1929.4	1878.2	1837.0	1810.3	1795.7	1790.8
15°	2038.7	2021.6	1975.5	1909.8	1846.7	1798.1	1768.9	1756.8	1751.9
17.5°	2026.5	2002.2	1946.3	1868.6	1798.1	1744.6	1715.5	1703.4	1703.4
20°	1977.9	1953.6	1888.0	1803.0	1727.7	1676.6	1647.4	1640.1	1635.3
22.5°	1909.8	1883.2	1812.7	1722.8	1647.4	1601.2	1581.8	1572.1	1569.7
25°	1827.2	1800.6	1725.2	1632.8	1560.0	1521.1	1504.0	1504.0	1501.7
27.5°	1735.0	1700.9	1623.2	1542.9	1472.5	1443.4	1436.0	1436.0	1438.5
30°	1606.2	1581.8	1516.3	1438.5	1372.9	1353.4	1353.4	1358.3	1358.3
32.5°	1467.6	1450.7	1392.3	1324.2	1273.2	1261.1	1265.9	1275.7	1278.2
35°	1336.5	1317.0	1278.2	1217.4	1178.5	1173.6	1181.0	1188.3	1188.3
37.5°	1207.7	1188.3	1161.5	1112.9	1083.7	1086.1	1095.9	1105.6	1112.9
40°	1081.3	1066.7	1047.2	1008.5	986.5	996.2	1008.5	1018.1	1027.8
42.5°	969.6	955.0	940.4	911.1	896.6	908.8	923.4	933.1	942.8
45°	867.4	857.8	843.2	818.9	809.1	821.2	838.3	848.0	857.8
47.5°	780.0	775.2	755.7	733.8	729.0	741.1	755.7	767.9	775.2
50°	699.8	692.6	675.5	653.7	648.7	668.2	678.0	685.3	692.6
52.5°	622.0	614.8	595.4	575.9	575.9	590.4	597.7	600.2	607.5
55°	554.0	546.7	527.3	512.7	507.8	520.0	524.9	524.9	529.7
57.5°	490.9	483.6	464.1	447.1	444.7	452.0	452.0	452.0	454.3
60°	430.1	422.8	403.3	388.8	383.9	386.3	383.9	381.5	383.9
62.5°	374.2	366.9	347.5	330.5	325.7	325.7	318.4	315.9	318.4
65°	323.2	311.1	296.4	279.5	269.7	262.4	252.7	252.7	252.7
67.5°	272.2	262.4	245.4	228.5	216.2	204.1	189.6	194.4	196.8
70°	226.0	218.7	199.2	182.3	165.2	150.7	138.6	143.4	145.8
72.5°	184.6	175.0	157.9	138.6	123.9	104.5	97.2	102.0	102.0
75°	143.4	133.6	119.1	99.7	82.6	65.6	65.6	68.0	68.0
77.5°	106.9	97.2	82.6	65.6	51.0	38.9	41.3	41.3	41.3
80°	72.9	65.6	53.5	38.9	26.7	21.9	21.9	21.9	24.3
82.5°	41.3	36.4	29.1	19.4	12.1	12.1	12.1	12.1	12.1
85°	19.4	14.6	12.1	7.3	4.8	4.8	4.8	4.8	4.8
87.5°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
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)