

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: P580434

Luminaire Tested: **HC435D010-HM43040830-41WWWB**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P580434
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-18)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 9/9/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HC435D010-HM43040830-41WWWB
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, BLACK BAFFLE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3551.0 lumens
Efficiency: N/A
Efficacy: 105.4 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.07 / 1.15
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

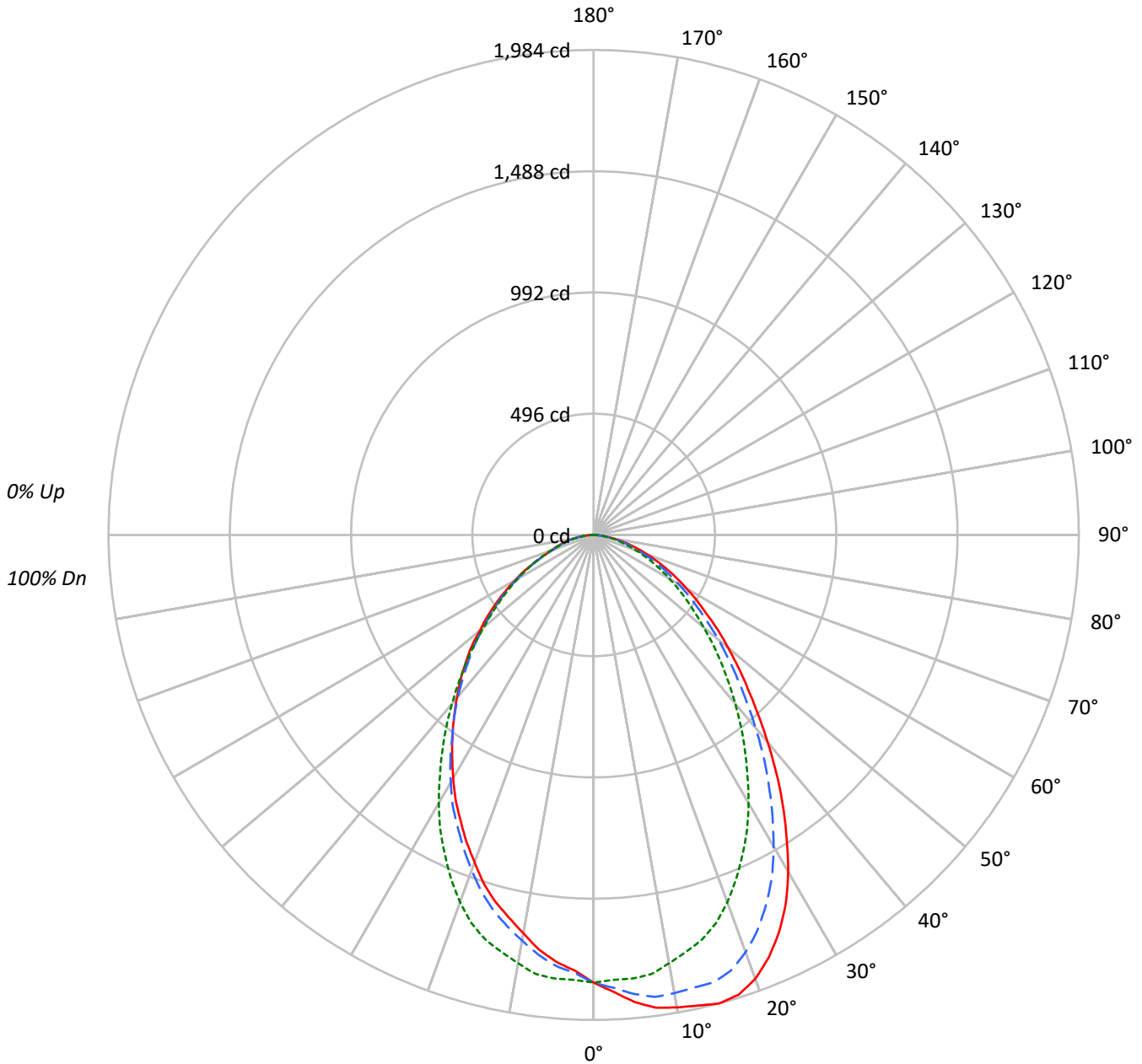
Input Watts (W): 33.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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								
1	110	106	103	99	108	104	101	98	100	97	95	96	94	92	92	91	89	87								
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	75								
3	94	85	77	72	92	83	76	71	80	75	70	78	73	69	75	71	68	66								
4	87	76	68	62	85	75	68	62	72	66	61	70	65	60	68	63	60	58								
5	81	69	61	55	79	68	60	55	66	59	54	64	58	53	62	57	53	51								
6	75	63	55	49	73	62	54	49	60	53	48	59	53	48	57	52	47	46								
7	70	58	50	44	68	57	49	44	55	48	43	54	48	43	53	47	43	41								
8	65	53	45	40	64	52	45	40	51	44	39	50	44	39	49	43	39	37								
9	61	49	41	36	60	48	41	36	47	41	36	46	40	36	45	40	36	34								
10	58	45	38	33	57	45	38	33	44	38	33	43	37	33	42	37	33	31								

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	225846	225846	225846
5°	237481	225557	217100
10°	245813	222855	207261
15°	253338	218808	198403
20°	253624	209796	186969
25°	244090	196102	175306
30°	226630	180441	163706
35°	203144	162458	151481
40°	178245	144947	140020
45°	155790	128333	129153
50°	137567	112314	116363
55°	121308	99588	104642
60°	108445	88143	91621
65°	96051	77518	77518
70°	83921	66105	66105
75°	71676	56045	62717
80°	56755	50078	56755
85°	36655	43306	53354



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	173.5	4.9
10°-20°	488.5	13.8
20°-30°	684.4	19.3
30°-40°	705.1	19.9
40°-50°	600.3	16.9
50°-60°	444.8	12.5
60°-70°	279.2	7.9
70°-80°	138.7	3.9
80°-90°	36.4	1.0
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°	1346.5	37.9
0°-40°	2051.6	57.8
0°-60°	3096.8	87.2
0°-90°	3551.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3551.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1831	1831	1831	1831	1831	
5°	1918	1885	1822	1770	1753	184
15°	1984	1894	1714	1589	1554	558
25°	1794	1669	1441	1316	1288	820
35°	1349	1248	1079	1008	1006	841
45°	893	832	736	722	740	693
55°	564	520	463	472	487	510
65°	329	296	266	261	266	328
75°	150	134	118	127	132	161
85°	26	26	31	35	38	33
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°	1831.0	1831.0	1831.0	1831.0	1831.0	1831.0	1831.0	1831.0	1831.0
2.5°	1871.0	1863.9	1854.5	1838.1	1821.7	1807.5	1793.5	1786.4	1784.0
5°	1918.0	1903.9	1885.1	1854.5	1821.7	1793.5	1770.0	1758.2	1753.4
7.5°	1950.9	1936.8	1906.3	1859.2	1812.2	1770.0	1732.3	1715.9	1711.2
10°	1962.6	1946.2	1903.9	1840.4	1779.3	1727.6	1685.3	1664.2	1654.8
12.5°	1972.1	1950.9	1896.9	1821.7	1746.4	1683.0	1638.3	1610.1	1603.0
15°	1983.9	1960.3	1894.5	1802.8	1713.5	1638.3	1588.9	1563.0	1553.7
17.5°	1972.1	1946.2	1868.6	1765.2	1664.2	1581.9	1527.9	1504.4	1494.9
20°	1932.2	1903.9	1816.9	1706.5	1598.3	1513.7	1459.6	1436.1	1424.4
22.5°	1871.0	1840.4	1751.1	1633.6	1523.1	1440.9	1389.2	1365.7	1358.6
25°	1793.5	1762.9	1668.8	1549.0	1440.9	1360.9	1316.3	1295.1	1288.1
27.5°	1701.7	1671.2	1579.6	1462.0	1358.6	1283.4	1248.1	1227.0	1222.2
30°	1591.2	1560.7	1471.4	1363.3	1266.9	1196.4	1168.2	1151.8	1149.4
32.5°	1469.1	1443.2	1360.9	1262.3	1170.5	1111.7	1090.6	1078.9	1076.6
35°	1349.1	1320.9	1248.1	1158.8	1078.9	1027.1	1008.3	1006.0	1006.0
37.5°	1227.0	1198.7	1140.0	1057.7	989.6	942.6	935.5	937.9	937.9
40°	1107.0	1081.2	1029.5	961.4	900.2	865.0	862.7	867.3	869.6
42.5°	994.3	973.2	926.1	867.3	815.6	787.4	789.7	799.2	806.2
45°	893.1	874.4	832.1	780.4	735.7	714.5	721.6	733.3	740.4
47.5°	801.5	785.1	745.1	698.1	660.5	646.4	655.7	669.9	679.3
50°	716.9	702.8	665.2	615.8	585.3	575.8	587.6	601.7	606.4
52.5°	641.7	627.5	587.6	545.4	521.8	517.2	528.8	540.6	547.6
55°	564.1	552.3	519.5	481.9	463.1	460.7	472.4	481.9	486.6
57.5°	500.6	488.9	458.4	425.4	409.0	406.7	418.4	425.4	427.8
60°	439.6	427.8	399.6	369.0	357.3	357.3	364.3	369.0	371.4
62.5°	383.2	371.4	345.5	319.7	310.2	310.2	310.2	312.6	319.7
65°	329.1	319.7	296.2	272.7	265.6	260.9	260.9	260.9	265.6
67.5°	279.8	270.3	251.6	230.3	223.3	216.3	213.9	218.6	218.6
70°	232.7	225.7	206.8	190.4	183.3	176.2	173.9	183.3	183.3
72.5°	190.4	183.3	171.6	155.1	148.0	145.8	150.4	155.1	157.5
75°	150.4	143.4	134.0	124.5	117.6	119.9	126.9	129.3	131.6
77.5°	112.8	110.5	101.0	94.0	94.0	96.3	101.0	105.8	108.1
80°	79.9	77.6	72.8	68.1	70.5	75.2	77.6	82.3	79.9
82.5°	49.3	49.3	47.0	47.0	49.3	54.1	56.4	58.8	61.1
85°	25.9	25.9	25.9	28.2	30.6	32.9	35.3	37.7	37.7
87.5°	7.1	9.4	9.4	11.8	14.0	14.0	16.4	16.4	16.4
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)