

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: P580505

Luminaire Tested: **HC435D010-HM43040930-41WWW**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P580505  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-16)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/9/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HC435D010-HM43040930-41WWW  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3058.1 lumens  
Efficiency: N/A  
Efficacy: 90.7 lumens/watt  
Spacing Criteria (0/90/45): 1.06 / 1.03 / 1.1  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

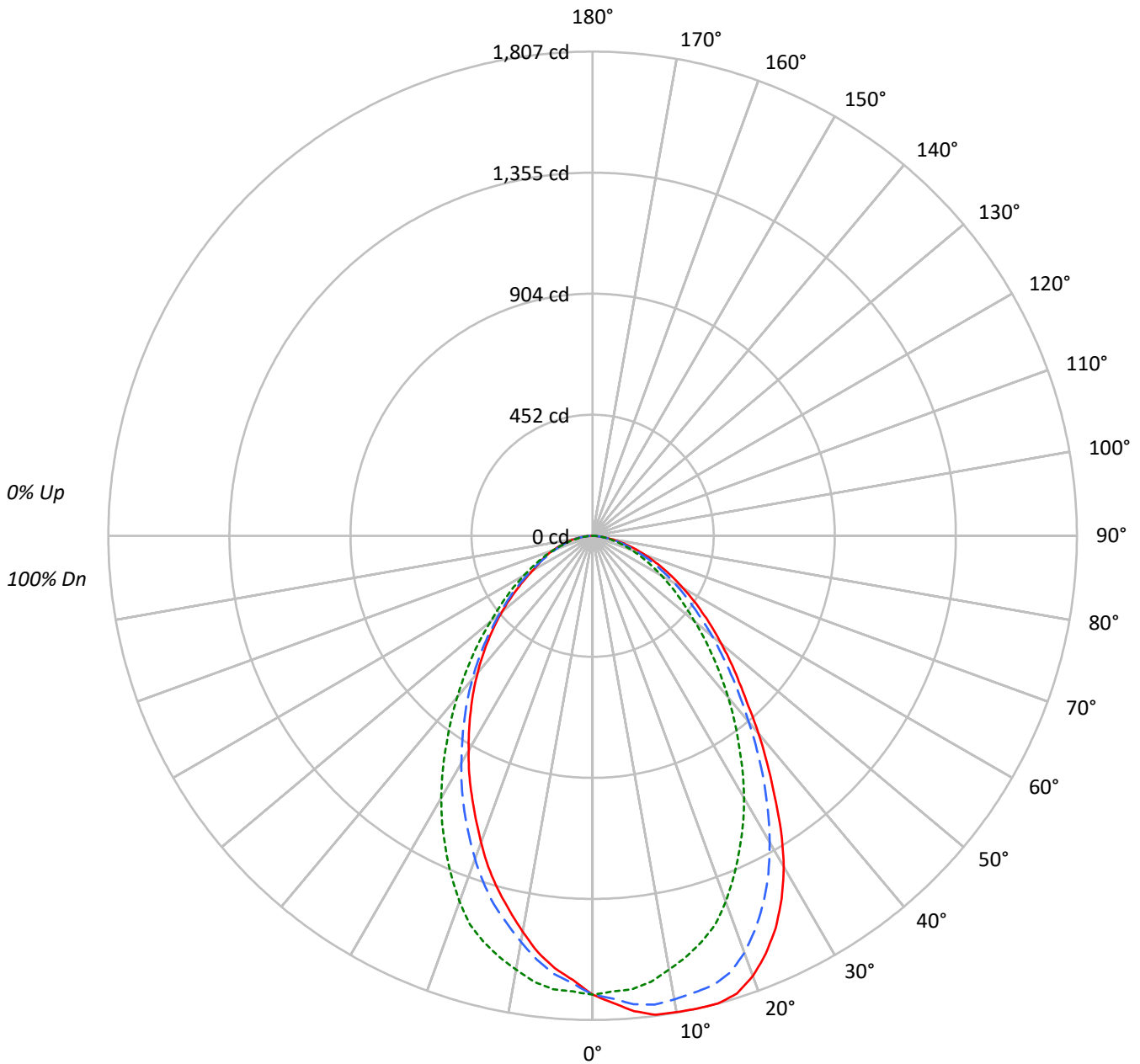
Input Watts (W): 33.7  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P580505

CATALOG NUMBER: HC435D010-HM43040930-41WWW

### Luminous Intensity Polar Plot





TEST NUMBER: P580505

CATALOG NUMBER: HC435D010-HM43040930-41WWW

**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	106	103	100	108	104	101	98	100	97	95	96	94	92	93	91	89	87	87	87	87
2	102	95	89	84	100	93	88	83	90	85	81	87	83	80	84	81	78	76	76	76	76
3	94	85	78	72	92	84	77	72	81	75	71	78	73	69	76	72	68	66	66	66	66
4	87	77	69	63	85	76	68	63	73	67	62	71	66	61	69	64	60	58	58	58	58
5	81	70	62	56	79	69	61	56	67	60	55	65	59	54	63	58	54	52	52	52	52
6	76	64	56	50	74	63	55	50	61	54	49	59	53	49	58	53	48	47	47	47	47
7	71	58	50	45	69	58	50	45	56	49	44	55	49	44	53	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	42	37	47	41	37	46	41	37	35	35	35	35
10	59	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°	211229	211229	211229
5°	220518	210290	200558
10°	226086	205908	187998
15°	230774	200407	174434
20°	229537	190658	159719
25°	219905	176300	145324
30°	203158	160971	131702
35°	178088	143184	119212
40°	155059	126510	107382
45°	134945	110349	95940
50°	120220	95102	84663
55°	107437	83610	73223
60°	95914	73070	63104
65°	85252	64093	59977
70°	74832	55214	55935
75°	63384	47038	51851
80°	48657	40062	47165
85°	28446	31277	39910



TEST NUMBER: P580505

CATALOG NUMBER: HC435D010-HM43040930-41WWW

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	160.5	5.2
10°-20°	442.8	14.5
20°-30°	604.9	19.8
30°-40°	607.4	19.9
40°-50°	502.5	16.4
50°-60°	364.2	11.9
60°-70°	230.7	7.5
70°-80°	116.6	3.8
80°-90°	28.5	0.9
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°	1208.2	39.5
0°-40°	1815.7	59.4
0°-60°	2682.3	87.7
0°-90°	3058.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3058.1	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1712	1712	1712	1712	1712	
5°	1781	1755	1698	1642	1620	171
15°	1807	1737	1569	1424	1366	508
25°	1616	1509	1295	1132	1068	738
35°	1183	1112	951	834	792	741
45°	774	729	633	570	550	602
55°	500	455	389	355	340	449
65°	292	260	220	198	206	291
75°	133	115	99	103	109	142
85°	20	20	22	26	28	28
90°	0	0	0	0	0	



TEST NUMBER: P580505

CATALOG NUMBER: HC435D010-HM43040930-41WWW

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	1712.5	1712.5	1712.5	1712.5	1712.5	1712.5	1712.5	1712.5	1712.5
2.5°	1744.7	1738.7	1728.6	1716.5	1702.4	1686.3	1672.2	1664.1	1660.1
5°	1781.0	1772.9	1754.8	1728.6	1698.4	1668.1	1641.9	1625.9	1619.8
7.5°	1803.1	1791.1	1764.9	1724.6	1678.2	1634.0	1595.6	1573.5	1567.4
10°	1805.1	1791.1	1756.8	1702.4	1644.0	1585.5	1539.2	1506.9	1501.0
12.5°	1807.2	1789.1	1746.7	1682.3	1609.7	1537.2	1480.8	1442.5	1432.4
15°	1807.2	1789.1	1736.7	1660.1	1569.4	1486.8	1424.3	1380.0	1366.0
17.5°	1791.1	1770.9	1708.5	1619.8	1521.1	1428.4	1355.9	1309.6	1295.4
20°	1748.7	1726.6	1656.1	1559.3	1452.5	1355.9	1283.4	1235.1	1216.8
22.5°	1688.2	1662.1	1587.5	1482.8	1376.0	1277.3	1206.8	1156.4	1140.3
25°	1615.8	1589.6	1509.0	1406.2	1295.4	1202.8	1132.2	1085.9	1067.8
27.5°	1527.2	1499.0	1420.4	1317.6	1214.8	1122.2	1057.7	1015.4	997.2
30°	1426.4	1396.1	1321.6	1222.9	1130.2	1041.6	979.1	944.8	924.7
32.5°	1309.6	1283.4	1216.8	1128.3	1041.6	957.0	904.6	874.4	858.3
35°	1182.7	1168.5	1112.1	1035.5	950.9	880.4	834.1	805.9	791.7
37.5°	1069.8	1055.7	1007.3	942.9	868.3	803.9	765.6	741.4	729.4
40°	963.0	950.9	904.6	850.2	785.7	729.4	697.1	678.9	666.9
42.5°	858.3	852.2	813.9	763.5	707.1	658.8	632.6	618.5	608.4
45°	773.6	765.6	729.4	680.9	632.6	592.3	570.2	560.1	550.0
47.5°	699.1	689.0	650.8	608.4	564.1	527.8	507.7	497.6	493.5
50°	626.5	616.5	582.2	540.0	495.6	469.4	453.3	443.2	441.2
52.5°	562.1	552.0	513.8	473.4	439.1	417.0	403.0	392.8	388.8
55°	499.6	487.6	455.3	417.0	388.8	368.7	354.6	344.5	340.5
57.5°	443.2	431.2	403.0	366.6	340.5	322.4	310.2	300.2	296.2
60°	388.8	378.8	352.6	318.3	296.2	280.0	268.0	259.9	255.8
62.5°	338.4	330.5	304.3	274.0	255.8	241.8	231.7	223.7	227.6
65°	292.1	284.0	259.9	233.7	219.6	205.5	197.5	197.5	205.5
67.5°	247.8	239.7	219.6	197.5	185.3	175.2	169.3	175.2	181.3
70°	207.5	199.4	181.3	163.2	153.1	145.1	145.1	151.1	155.1
72.5°	169.3	161.2	147.0	133.0	124.9	118.9	124.9	128.9	133.0
75°	133.0	126.9	114.9	104.8	98.7	96.7	102.7	106.8	108.8
77.5°	98.7	94.6	86.7	78.6	74.5	76.5	82.6	84.6	86.7
80°	68.5	66.4	60.5	56.4	56.4	58.4	62.5	64.5	66.4
82.5°	42.3	42.3	38.3	36.3	38.3	42.3	44.3	46.3	46.3
85°	20.1	22.1	20.1	20.1	22.1	26.2	26.2	28.2	28.2
87.5°	6.1	6.1	8.1	8.1	10.1	10.1	10.1	10.1	12.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



Report Generated By 670245859 / DESKTOP-HRDQ47P







— 0°-180°    - - 45°-225°    - - - - 90°-270°







(END OF REPORT)