

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: P580400

Luminaire Tested: **HC435D010-HM43040827-41WWBB**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P580400  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-17)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/9/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HC435D010-HM43040827-41WWBB  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE BAFFLE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2637.1 lumens  
Efficiency: N/A  
Efficacy: 78.3 lumens/watt  
Spacing Criteria (0/90/45): 1.11 / 1.04 / 1.12  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

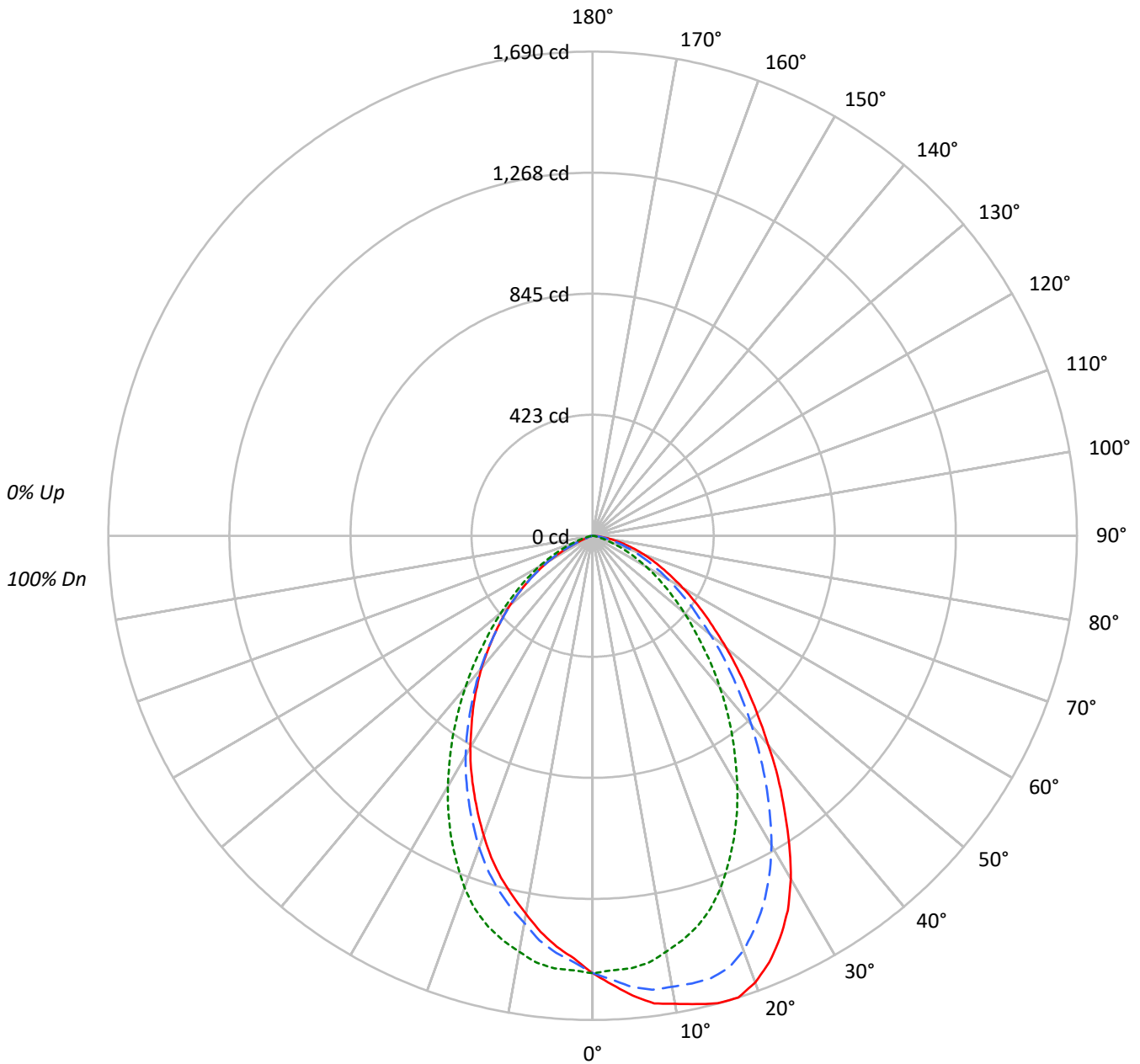
Input Watts (W): 33.7  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	108	104	101	109	105	102	100	101	99	97	97	95	94	94	92	91	89	89	89	89
2	103	97	91	87	101	95	90	86	92	87	84	88	85	82	85	83	80	78	78	78	78
3	96	87	80	75	94	86	79	74	83	78	73	80	76	72	78	74	71	69	69	69	69
4	89	79	72	66	87	78	71	65	75	69	65	73	68	64	71	67	63	61	61	61	61
5	83	72	64	58	81	71	64	58	69	62	58	67	61	57	65	60	56	55	55	55	55
6	77	66	58	52	75	65	57	52	63	57	52	61	56	51	60	55	51	49	49	49	49
7	72	60	53	47	71	59	52	47	58	51	47	57	51	46	55	50	46	44	44	44	44
8	68	56	48	43	66	55	48	43	54	47	42	53	47	42	51	46	42	40	40	40	40
9	64	52	44	39	62	51	44	39	50	43	39	49	43	39	48	43	39	37	37	37	37
10	60	48	41	36	59	47	41	36	46	40	36	46	40	36	45	39	36	34	34	34	34

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°
0°	188312	188312	188312
5°	199518	187681	178271
10°	207800	184691	167820
15°	215756	180257	157795
20°	217776	171598	145963
25°	210732	158730	133593
30°	197034	143823	121562
35°	175618	127870	109214
40°	153513	111198	97206
45°	133723	94336	84096
50°	116689	80019	72113
55°	102276	66320	58364
60°	89475	53581	42875
65°	77985	39927	24079
70°	68125	25858	7826
75°	55854	13439	2097
80°	41696	6180	1492
85°	24625	2972	2972



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	144.1	5.5
10°-20°	403.3	15.3
20°-30°	557.6	21.1
30°-40°	560.7	21.3
40°-50°	452.4	17.2
50°-60°	305.9	11.6
60°-70°	155.7	5.9
70°-80°	49.9	1.9
80°-90°	7.6	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°	1105.0	41.9
0°-40°	1665.6	63.2
0°-60°	2423.9	91.9
0°-90°	2637.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2637.1	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1527	1527	1527	1527	1527	
5°	1611	1581	1516	1462	1440	155
15°	1690	1598	1412	1277	1236	476
25°	1548	1414	1166	1023	982	709
35°	1166	1053	849	743	725	729
45°	767	686	541	482	482	594
55°	476	410	308	269	271	427
65°	267	217	137	89	82	268
75°	117	82	28	6	4	126
85°	17	9	2	2	2	23
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°	1526.7	1526.7	1526.7	1526.7	1526.7	1526.7	1526.7	1526.7	1526.7
2.5°	1568.0	1559.3	1550.6	1535.4	1518.1	1500.7	1489.7	1481.1	1476.8
5°	1611.4	1600.6	1581.0	1548.4	1515.8	1485.5	1461.5	1446.4	1439.8
7.5°	1646.2	1630.9	1598.3	1552.8	1502.8	1455.0	1424.7	1403.0	1394.2
10°	1659.1	1641.8	1598.3	1537.6	1474.6	1416.0	1372.5	1350.8	1339.9
12.5°	1674.4	1654.9	1600.6	1524.6	1446.4	1376.9	1326.9	1298.7	1287.9
15°	1689.6	1663.5	1598.3	1505.0	1411.6	1331.3	1277.0	1248.8	1235.7
17.5°	1689.6	1659.1	1581.0	1472.4	1366.0	1281.4	1220.6	1188.0	1177.1
20°	1659.1	1624.4	1539.8	1420.3	1307.3	1216.2	1157.5	1124.9	1112.0
22.5°	1611.4	1572.4	1481.1	1357.3	1237.9	1148.8	1090.2	1059.8	1046.8
25°	1548.4	1509.3	1413.8	1285.6	1166.3	1077.1	1022.8	994.6	981.6
27.5°	1474.6	1431.2	1335.6	1207.5	1090.2	1005.5	955.5	929.5	918.6
30°	1383.4	1342.2	1248.8	1122.8	1009.8	931.7	886.0	862.2	853.5
32.5°	1277.0	1242.2	1151.0	1033.7	927.3	855.7	814.3	794.9	786.1
35°	1166.3	1133.7	1053.3	944.7	849.2	781.9	742.7	729.7	725.3
37.5°	1062.0	1033.7	955.5	855.7	768.8	710.1	675.4	666.8	662.4
40°	953.4	933.8	862.2	771.0	690.6	638.4	610.2	603.7	603.7
42.5°	855.7	833.9	771.0	688.4	616.7	564.7	545.1	538.6	540.8
45°	766.6	744.9	686.3	610.2	540.8	497.4	482.1	482.1	482.1
47.5°	684.1	664.5	610.2	532.1	475.6	440.8	425.7	425.7	427.8
50°	608.1	595.0	534.2	466.9	417.0	384.4	373.5	371.4	375.8
52.5°	536.4	521.2	466.9	406.1	358.3	332.3	321.5	319.2	321.5
55°	475.6	458.3	410.5	351.8	308.4	282.3	269.3	267.2	271.4
57.5°	417.0	404.0	353.9	301.9	260.7	234.6	223.7	219.3	221.5
60°	362.7	349.7	304.0	254.1	217.2	191.1	175.9	171.5	173.8
62.5°	312.7	301.9	258.4	210.6	173.8	149.8	134.7	123.8	128.1
65°	267.2	256.3	217.2	169.4	136.8	110.7	89.0	80.4	82.5
67.5°	228.1	215.0	178.0	134.7	102.1	73.8	49.9	45.6	45.6
70°	188.9	175.9	143.3	104.2	71.7	39.1	21.7	21.7	21.7
72.5°	152.0	141.2	110.7	78.2	45.6	17.4	8.7	8.7	8.7
75°	117.2	108.6	82.5	54.3	28.2	8.7	6.5	4.4	4.4
77.5°	86.9	78.2	58.7	36.9	17.4	4.4	4.4	4.4	4.4
80°	58.7	52.2	39.1	21.7	8.7	2.1	2.1	2.1	2.1
82.5°	34.7	30.3	21.7	10.9	4.4	2.1	2.1	2.1	2.1
85°	17.4	13.0	8.7	4.4	2.1	2.1	2.1	2.1	2.1
87.5°	4.4	2.1	2.1	2.1	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)