

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: P580322

Luminaire Tested: **HC430D010-HM43040840-41RWWC**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P580322  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-14)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/9/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HC430D010-HM43040840-41RWWC  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, SPECULAR TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3174.7 lumens  
Efficiency: N/A  
Efficacy: 113.4 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.15 / 1.21  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

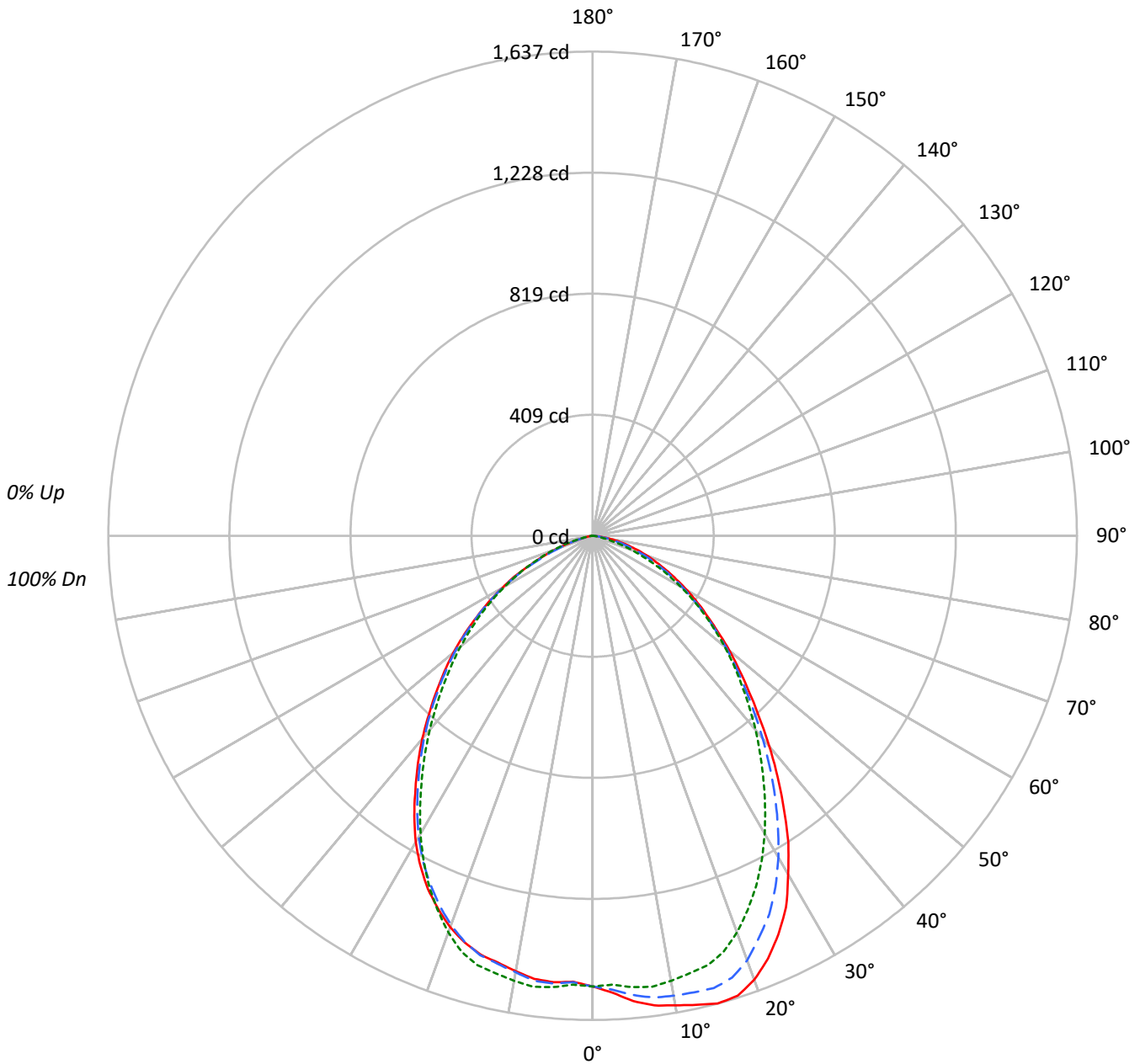
Input Watts (W): 28  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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
1	111	107	103	100	108	105	102	99	101	98	96	97	95	93	93	92	90	88			88
2	102	95	90	85	100	94	88	84	90	86	82	87	83	80	84	81	78	76			76
3	95	85	78	73	92	84	77	72	81	75	71	78	74	70	76	72	69	67			67
4	87	77	69	63	85	76	68	63	73	67	62	71	66	61	69	64	60	58			58
5	81	70	61	56	79	68	61	55	66	60	55	65	59	54	63	58	54	52			52
6	75	63	55	49	74	62	55	49	61	54	49	59	53	48	58	52	48	46			46
7	70	58	50	44	69	57	49	44	56	49	44	54	48	44	53	47	43	41			41
8	66	53	45	40	64	53	45	40	51	44	40	50	44	39	49	43	39	37			37
9	62	49	42	36	60	49	41	36	47	41	36	46	40	36	45	40	36	34			34
10	58	46	38	33	57	45	38	33	44	38	33	43	37	33	42	37	33	31			31

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

	0°	90°	180°
0°	187917	187917	187917
5°	195519	189650	187607
10°	201900	191342	187196
15°	209001	191903	187178
20°	209704	187271	184843
25°	202294	177933	179321
30°	188246	165671	170357
35°	169565	151586	157157
40°	149504	137910	144190
45°	130706	124252	130357
50°	115768	111796	117726
55°	101825	98728	102706
60°	90906	84319	86835
65°	79911	68500	67303
70°	69820	50489	46054
75°	57903	30405	24496
80°	43898	11720	7316
85°	20379	2830	2830



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	146.9	4.6
10°-20°	428.8	13.5
20°-30°	621.0	19.6
30°-40°	655.2	20.6
40°-50°	567.1	17.9
50°-60°	420.1	13.2
60°-70°	242.1	7.6
70°-80°	84.6	2.7
80°-90°	8.9	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°	1196.8	37.7
0°-40°	1852.0	58.3
0°-60°	2839.1	89.4
0°-90°	3174.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3174.7	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1524	1524	1524	1524	1524	
5°	1579	1558	1532	1519	1515	152
15°	1637	1583	1503	1468	1466	460
25°	1486	1412	1307	1299	1318	680
35°	1126	1075	1007	1029	1044	703
45°	749	729	712	739	747	582
55°	474	463	459	476	478	427
65°	274	257	235	222	231	273
75°	122	103	64	51	51	131
85°	14	8	2	2	2	22
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°	1523.5	1523.5	1523.5	1523.5	1523.5	1523.5	1523.5	1523.5	1523.5
2.5°	1546.1	1542.0	1535.9	1527.7	1519.3	1513.2	1511.1	1509.0	1509.0
5°	1579.1	1570.9	1558.4	1542.0	1531.7	1525.5	1519.3	1515.2	1515.2
7.5°	1601.8	1593.5	1574.9	1552.4	1537.9	1525.5	1517.3	1511.1	1511.1
10°	1612.0	1601.8	1579.1	1550.2	1527.7	1511.1	1498.8	1494.6	1494.6
12.5°	1624.3	1612.0	1581.1	1544.1	1515.2	1494.6	1482.3	1478.1	1478.1
15°	1636.7	1622.3	1583.1	1539.9	1502.8	1478.1	1467.9	1465.8	1465.8
17.5°	1630.5	1612.0	1566.7	1515.2	1474.1	1449.4	1439.1	1439.1	1441.1
20°	1597.6	1579.1	1527.7	1469.9	1426.7	1408.2	1400.0	1404.0	1408.2
22.5°	1548.2	1525.5	1469.9	1414.4	1369.1	1352.6	1352.6	1358.8	1365.0
25°	1486.4	1465.8	1412.3	1350.6	1307.4	1294.9	1299.1	1309.4	1317.6
27.5°	1416.4	1393.8	1338.1	1280.5	1237.3	1231.1	1241.5	1255.8	1260.0
30°	1321.7	1303.2	1255.8	1200.3	1163.2	1161.2	1175.6	1185.9	1196.1
32.5°	1231.1	1210.6	1165.2	1111.8	1084.9	1087.1	1103.5	1115.8	1122.0
35°	1126.1	1107.6	1074.6	1031.4	1006.7	1010.8	1029.4	1041.7	1043.7
37.5°	1027.3	1015.0	982.0	949.1	930.6	938.8	955.3	969.6	969.6
40°	928.5	918.2	893.5	866.8	856.5	866.8	883.2	895.5	895.5
42.5°	833.8	827.6	807.1	788.5	782.4	796.7	811.1	821.4	819.4
45°	749.3	743.2	728.8	714.4	712.3	726.8	739.1	745.3	747.3
47.5°	673.2	669.1	656.7	646.5	646.5	660.9	671.2	677.4	679.4
50°	603.3	599.1	588.8	580.6	582.6	597.1	605.3	611.5	613.5
52.5°	533.2	531.2	522.9	512.7	518.8	529.1	539.4	543.5	545.6
55°	473.5	473.5	463.3	455.0	459.1	469.4	475.6	477.6	477.6
57.5°	420.0	417.9	405.6	397.4	399.4	409.7	413.9	415.9	415.9
60°	368.5	366.5	354.1	341.8	341.8	347.9	350.0	352.0	352.0
62.5°	319.1	317.1	302.6	292.4	288.2	286.2	286.2	290.2	298.5
65°	273.8	271.7	257.3	240.8	234.7	228.5	222.3	226.5	230.6
67.5°	232.6	228.5	214.1	199.7	185.3	175.0	164.7	170.9	179.1
70°	193.6	189.4	172.9	156.5	140.0	123.5	115.3	123.5	127.7
72.5°	156.5	152.4	135.9	119.5	98.8	82.3	80.3	82.3	84.4
75°	121.5	119.5	103.0	84.4	63.8	51.4	51.4	51.4	51.4
77.5°	90.6	86.5	70.0	53.6	37.1	28.9	26.7	26.7	26.7
80°	61.8	57.6	43.2	30.9	16.5	12.4	12.4	10.3	10.3
82.5°	35.0	32.9	22.7	12.4	6.2	4.2	4.2	4.2	4.2
85°	14.4	12.4	8.2	4.2	2.0	2.0	2.0	2.0	2.0
87.5°	2.0	2.0	2.0	0.0	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)