

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: P580521

Luminaire Tested: **HC435D010-HM43040935-41RWWH**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P580521
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: HC435D010-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: 3223.4 lumens
Efficiency: N/A
Efficacy: 95.6 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

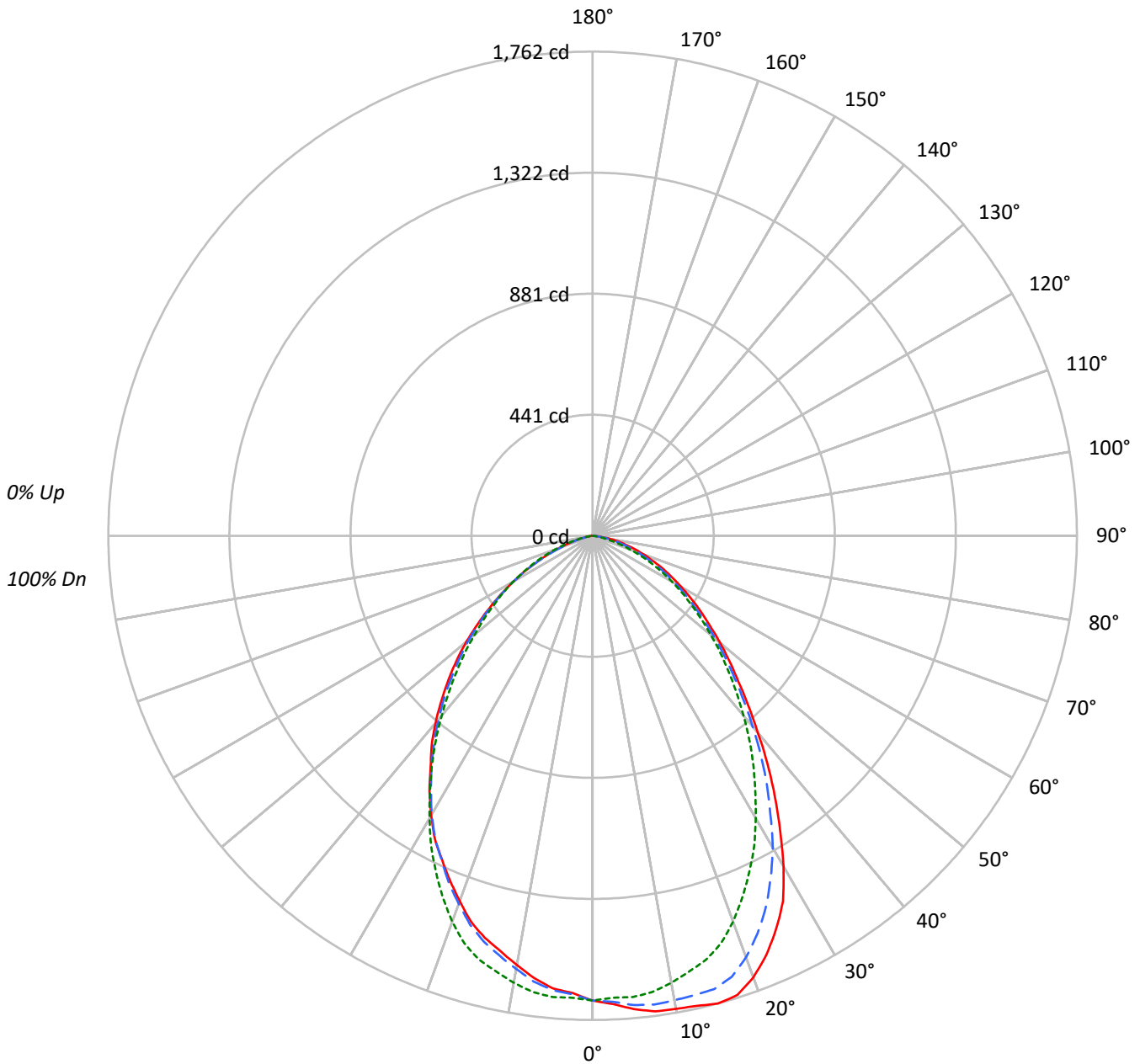
Input Watts (W): 33.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	208602	208602	208602
5°	214067	208619	204706
10°	218909	206823	198657
15°	225066	203881	193422
20°	224471	196066	185591
25°	215006	183554	176695
30°	197774	169047	167267
35°	173992	153423	154688
40°	150518	137331	143079
45°	130810	122036	129363
50°	116094	107632	114905
55°	102986	94405	98470
60°	91720	81877	81877
65°	81546	68062	63772
70°	70469	51535	45440
75°	59095	34027	28022
80°	44821	16479	14917
85°	23917	5944	5944



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	160.2	5.0
10°-20°	454.1	14.1
20°-30°	640.3	19.9
30°-40°	661.5	20.5
40°-50°	560.7	17.4
50°-60°	408.0	12.7
60°-70°	238.4	7.4
70°-80°	88.6	2.7
80°-90°	11.6	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°	1254.5	38.9
0°-40°	1916.0	59.4
0°-60°	2884.7	89.5
0°-90°	3223.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3223.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1691	1691	1691	1691	1691	
5°	1729	1714	1685	1660	1653	166
15°	1762	1708	1597	1529	1515	495
25°	1580	1492	1349	1300	1298	723
35°	1156	1105	1019	1021	1027	722
45°	750	729	700	725	742	584
55°	479	456	439	454	458	431
65°	279	256	233	218	218	277
75°	124	103	71	57	59	133
85°	17	10	4	4	4	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°	1691.2	1691.2	1691.2	1691.2	1691.2	1691.2	1691.2	1691.2	1691.2
2.5°	1705.9	1701.6	1697.5	1691.2	1682.7	1676.4	1670.2	1665.9	1665.9
5°	1728.9	1722.6	1714.2	1699.5	1684.9	1672.2	1659.6	1653.3	1653.3
7.5°	1745.8	1737.4	1720.5	1699.5	1674.3	1655.4	1636.5	1628.1	1624.0
10°	1747.8	1739.5	1716.3	1684.9	1651.3	1621.8	1600.8	1588.2	1586.1
12.5°	1752.1	1741.5	1712.2	1668.0	1624.0	1588.2	1565.1	1552.5	1548.3
15°	1762.5	1747.8	1707.9	1651.3	1596.6	1554.6	1529.4	1518.9	1514.7
17.5°	1752.1	1731.1	1682.7	1615.5	1554.6	1508.4	1483.1	1472.7	1472.7
20°	1710.1	1689.0	1632.3	1558.8	1493.7	1449.5	1424.3	1418.0	1413.9
22.5°	1651.3	1628.1	1567.2	1489.4	1424.3	1384.4	1367.6	1359.3	1357.1
25°	1579.8	1556.7	1491.5	1411.7	1348.7	1315.1	1300.4	1300.4	1298.3
27.5°	1500.0	1470.5	1403.3	1334.0	1273.0	1247.9	1241.6	1241.6	1243.7
30°	1388.6	1367.6	1310.9	1243.7	1186.9	1170.2	1170.2	1174.4	1174.4
32.5°	1268.9	1254.2	1203.8	1144.9	1100.8	1090.3	1094.6	1102.9	1105.0
35°	1155.5	1138.6	1105.0	1052.5	1018.9	1014.6	1020.9	1027.3	1027.3
37.5°	1044.1	1027.3	1004.2	962.1	937.0	939.1	947.4	955.8	962.1
40°	934.8	922.2	905.5	871.8	852.9	861.3	871.8	880.2	888.6
42.5°	838.2	825.6	813.0	787.8	775.2	785.7	798.3	806.7	815.1
45°	749.9	741.6	729.0	708.0	699.6	710.0	724.8	733.2	741.6
47.5°	674.4	670.1	653.4	634.4	630.2	640.8	653.4	663.8	670.1
50°	605.0	598.8	584.0	565.1	560.9	577.7	586.2	592.5	598.8
52.5°	537.8	531.5	514.7	497.9	497.9	510.5	516.8	519.0	525.2
55°	478.9	472.6	455.9	443.3	439.0	449.6	453.8	453.8	457.9
57.5°	424.3	418.0	401.3	386.5	384.4	390.7	390.7	390.7	392.8
60°	371.8	365.5	348.8	336.1	331.9	334.1	331.9	329.8	331.9
62.5°	323.5	317.2	300.4	285.7	281.6	281.6	275.2	273.1	275.2
65°	279.4	268.9	256.3	241.5	233.2	226.9	218.5	218.5	218.5
67.5°	235.3	226.9	212.2	197.5	186.9	176.5	163.9	168.0	170.2
70°	195.4	189.1	172.3	157.6	142.9	130.3	119.7	124.0	126.0
72.5°	159.6	151.3	136.6	119.7	107.1	90.4	84.1	88.2	88.2
75°	124.0	115.5	103.0	86.1	71.4	56.8	56.8	58.8	58.8
77.5°	92.4	84.1	71.4	56.8	44.1	33.6	35.7	35.7	35.7
80°	63.1	56.8	46.2	33.6	23.2	18.9	18.9	18.9	21.0
82.5°	35.7	31.5	25.2	16.9	10.5	10.5	10.5	10.5	10.5
85°	16.9	12.6	10.5	6.3	4.2	4.2	4.2	4.2	4.2
87.5°	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
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)