

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: P580506

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

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P580506
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-HM43040930-41WWWB
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, BLACK BAFFLE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3044.0 lumens
Efficiency: N/A
Efficacy: 90.3 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

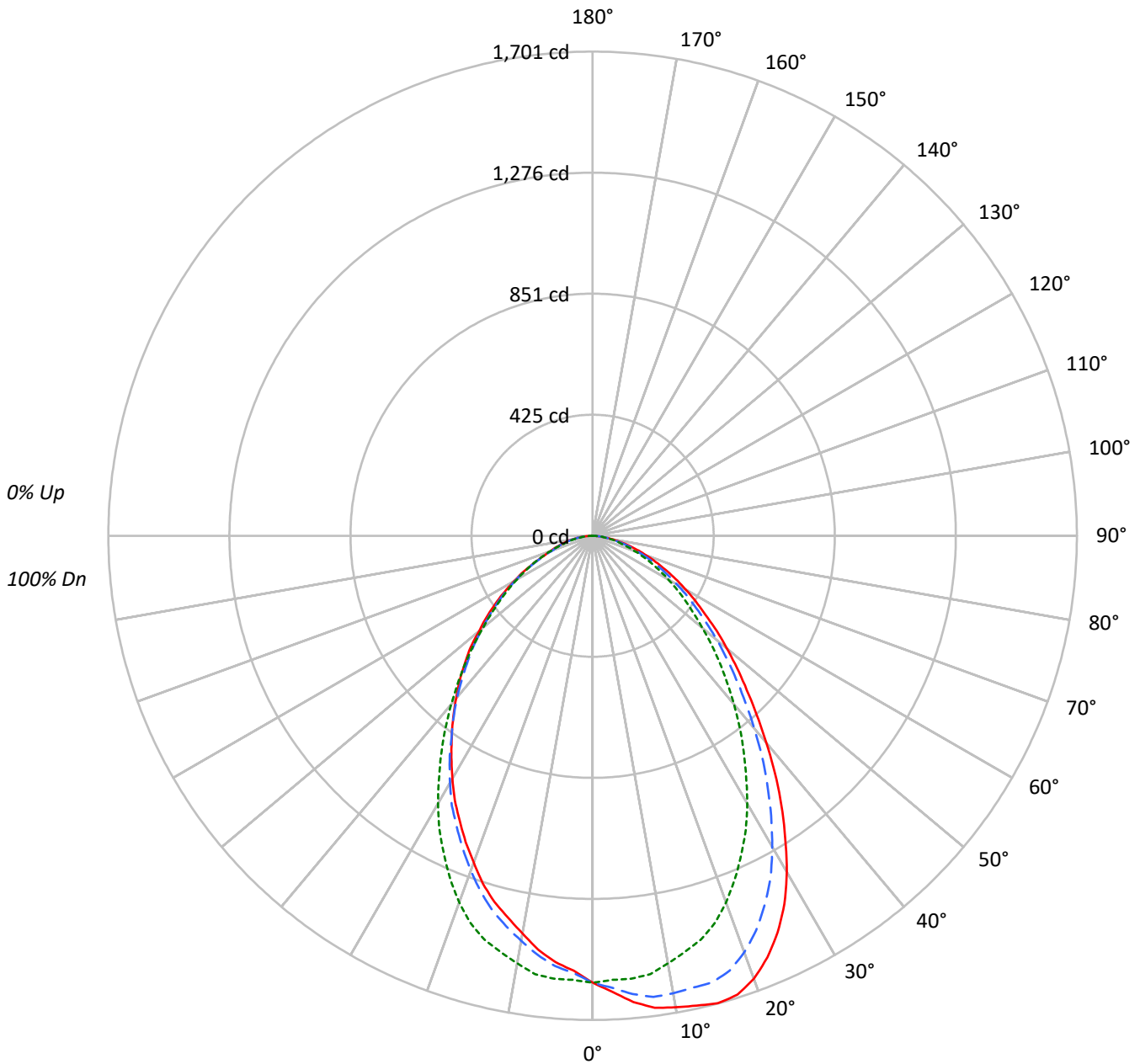
Input Watts (W): 33.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	193616	193616	193616
5°	203580	193352	186109
10°	210718	191041	177665
15°	217161	187561	170067
20°	217396	179855	160271
25°	209235	168107	150278
30°	194285	154676	140334
35°	174158	139254	129843
40°	152804	124256	120038
45°	133566	110017	110715
50°	117937	96291	99745
55°	103975	85352	89696
60°	92953	75562	78522
65°	82334	66457	66457
70°	71947	56656	56656
75°	61430	47991	53757
80°	48657	42974	48657
85°	31277	37079	45712



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	148.7	4.9
10°-20°	418.8	13.8
20°-30°	586.7	19.3
30°-40°	604.5	19.9
40°-50°	514.6	16.9
50°-60°	381.3	12.5
60°-70°	239.3	7.9
70°-80°	118.9	3.9
80°-90°	31.2	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°	1154.2	37.9
0°-40°	1758.7	57.8
0°-60°	2654.7	87.2
0°-90°	3044.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3044.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1570	1570	1570	1570	1570	
5°	1644	1616	1562	1517	1503	158
15°	1701	1624	1469	1362	1332	478
25°	1537	1431	1235	1128	1104	703
35°	1157	1070	925	864	862	721
45°	766	713	631	618	635	594
55°	484	445	397	405	417	437
65°	282	254	228	224	228	281
75°	129	115	101	109	113	138
85°	22	22	26	30	32	28
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°	1569.7	1569.7	1569.7	1569.7	1569.7	1569.7	1569.7	1569.7	1569.7
2.5°	1603.8	1597.9	1589.8	1575.6	1561.6	1549.4	1537.4	1531.3	1529.3
5°	1644.2	1632.0	1616.0	1589.8	1561.6	1537.4	1517.3	1507.2	1503.1
7.5°	1672.4	1660.3	1634.1	1593.8	1553.5	1517.3	1485.0	1470.9	1466.8
10°	1682.4	1668.4	1632.0	1577.6	1525.3	1481.0	1444.7	1426.6	1418.5
12.5°	1690.5	1672.4	1626.1	1561.6	1497.1	1442.7	1404.4	1380.3	1374.2
15°	1700.6	1680.5	1624.1	1545.4	1468.8	1404.4	1362.1	1339.9	1331.8
17.5°	1690.5	1668.4	1601.8	1513.2	1426.6	1356.0	1309.7	1289.6	1281.5
20°	1656.2	1632.0	1557.5	1462.9	1370.2	1297.7	1251.2	1231.1	1221.0
22.5°	1603.8	1577.6	1501.1	1400.4	1305.6	1235.2	1190.8	1170.6	1164.6
25°	1537.4	1511.2	1430.6	1327.8	1235.2	1166.6	1128.4	1110.2	1104.2
27.5°	1458.8	1432.7	1354.0	1253.3	1164.6	1100.2	1069.9	1051.8	1047.8
30°	1364.1	1337.9	1261.4	1168.6	1086.0	1025.6	1001.4	987.3	985.3
32.5°	1259.3	1237.2	1166.6	1082.0	1003.4	953.0	934.9	924.8	922.8
35°	1156.6	1132.4	1069.9	993.4	924.8	880.5	864.4	862.3	862.3
37.5°	1051.8	1027.6	977.2	906.7	848.3	807.9	802.0	804.0	804.0
40°	949.0	926.9	882.6	824.1	771.7	741.5	739.5	743.5	745.5
42.5°	852.3	834.2	793.9	743.5	699.1	675.0	677.0	685.1	691.1
45°	765.7	749.6	713.3	669.0	630.7	612.6	618.5	628.7	634.7
47.5°	687.1	672.9	638.8	598.4	566.2	554.1	562.1	574.3	582.3
50°	614.6	602.5	570.2	527.9	501.8	493.7	503.8	515.8	519.8
52.5°	550.1	537.9	503.8	467.5	447.4	443.3	453.3	463.4	469.5
55°	483.5	473.5	445.3	413.1	396.9	395.0	405.0	413.1	417.1
57.5°	429.1	419.1	393.0	364.7	350.6	348.6	358.7	364.7	366.8
60°	376.8	366.8	342.5	316.3	306.3	306.3	312.4	316.3	318.3
62.5°	328.4	318.3	296.2	274.0	265.9	265.9	265.9	268.0	274.0
65°	282.1	274.0	253.9	233.7	227.7	223.7	223.7	223.7	227.7
67.5°	239.7	231.8	215.6	197.5	191.4	185.3	183.3	187.4	187.4
70°	199.5	193.4	177.4	163.2	157.1	151.1	149.2	157.1	157.1
72.5°	163.2	157.1	147.1	133.0	126.9	124.9	128.9	133.0	135.0
75°	128.9	123.0	114.9	106.8	100.7	102.7	108.8	110.8	112.8
77.5°	96.7	94.8	86.7	80.6	80.6	82.6	86.7	90.7	92.7
80°	68.5	66.5	62.5	58.4	60.5	64.5	66.5	70.5	68.5
82.5°	42.3	42.3	40.4	40.4	42.3	46.3	48.3	50.4	52.4
85°	22.1	22.1	22.1	24.2	26.2	28.2	30.2	32.3	32.3
87.5°	6.1	8.1	8.1	10.1	12.1	12.1	14.0	14.0	14.0
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)