

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: P580540

Luminaire Tested: **HC435D010-HM43040940-41WWBB**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P580540
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-HM43040940-41WWBB
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE BAFFLE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2549.1 lumens
Efficiency: N/A
Efficacy: 75.6 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

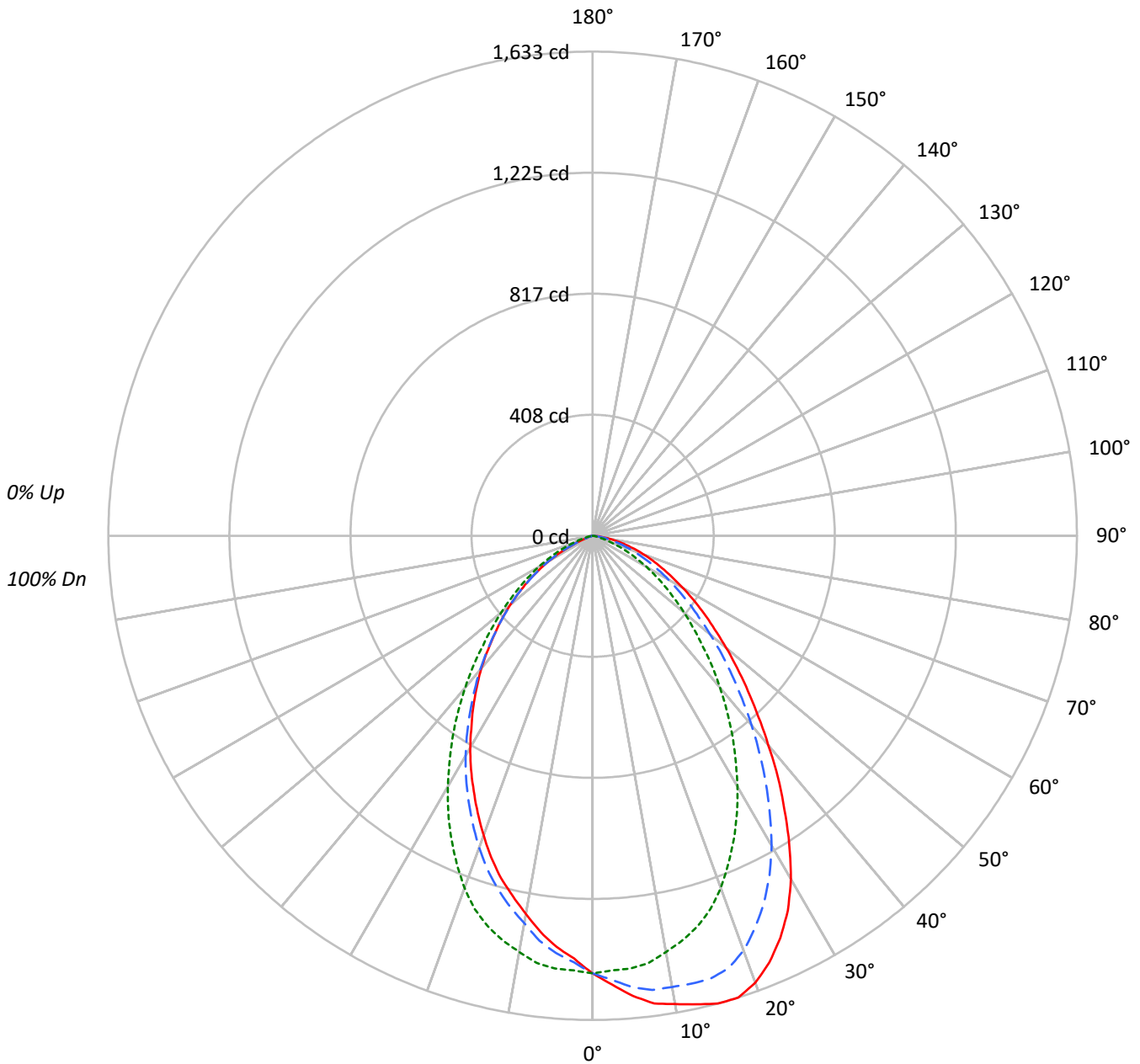
Input Watts (W): 33.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	111	108	104	101	109	105	102	100	101	99	97	97	95	94	94	92	91	89								
2	103	97	91	87	101	95	90	86	92	87	84	88	85	82	85	83	80	78								
3	96	87	80	75	94	86	79	74	83	78	73	80	76	72	78	74	71	69								
4	89	79	72	66	87	78	71	65	75	69	65	73	68	64	71	67	63	61								
5	83	72	64	58	81	71	64	58	69	62	58	67	61	57	65	60	56	55								
6	77	66	58	52	75	65	57	52	63	57	52	61	56	51	60	55	51	49								
7	72	60	53	47	71	59	52	47	58	51	47	57	51	46	55	50	46	44								
8	68	56	48	43	66	55	48	43	54	47	42	53	47	42	51	46	42	40								
9	64	52	44	39	62	51	44	39	50	43	39	49	43	39	48	43	39	37								
10	60	48	41	36	59	47	41	36	46	40	36	46	40	36	45	39	36	34								

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	182033	182033	182033
5°	192857	181416	172328
10°	200873	178517	162222
15°	208554	174242	152534
20°	210517	165875	141080
25°	203696	153422	129142
30°	190454	139037	117502
35°	169746	123609	105585
40°	148393	107478	93969
45°	129275	91178	81288
50°	112775	77352	69695
55°	98857	64105	56450
60°	86490	51805	41419
65°	75358	38613	23290
70°	65853	24956	7573
75°	54043	13010	2002
80°	40204	5967	1492
85°	23634	2972	2972



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	139.3	5.5
10°-20°	389.8	15.3
20°-30°	539.0	21.1
30°-40°	541.9	21.3
40°-50°	437.3	17.2
50°-60°	295.7	11.6
60°-70°	150.5	5.9
70°-80°	48.2	1.9
80°-90°	7.4	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°	1068.1	41.9
0°-40°	1610.0	63.2
0°-60°	2343.1	91.9
0°-90°	2549.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2549.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1476	1476	1476	1476	1476	
5°	1558	1528	1465	1413	1392	150
15°	1633	1545	1364	1234	1194	460
25°	1497	1367	1127	989	949	685
35°	1127	1018	821	718	701	704
45°	741	663	523	466	466	574
55°	460	397	298	260	262	413
65°	258	210	132	86	80	259
75°	113	80	27	6	4	122
85°	17	8	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°	1475.8	1475.8	1475.8	1475.8	1475.8	1475.8	1475.8	1475.8	1475.8
2.5°	1515.7	1507.3	1498.9	1484.1	1467.4	1450.6	1440.1	1431.6	1427.5
5°	1557.6	1547.2	1528.3	1496.7	1465.2	1435.9	1412.8	1398.1	1391.8
7.5°	1591.2	1576.5	1545.1	1501.0	1452.7	1406.5	1377.1	1356.1	1347.7
10°	1603.8	1587.1	1545.1	1486.3	1425.3	1368.7	1326.8	1305.8	1295.2
12.5°	1618.6	1599.7	1547.2	1473.7	1398.1	1330.9	1282.6	1255.4	1244.8
15°	1633.2	1608.0	1545.1	1454.8	1364.5	1286.9	1234.4	1207.1	1194.5
17.5°	1633.2	1603.8	1528.3	1423.3	1320.5	1238.5	1179.8	1148.3	1137.8
20°	1603.8	1570.2	1488.4	1373.0	1263.7	1175.6	1118.9	1087.4	1074.8
22.5°	1557.6	1519.9	1431.6	1312.0	1196.6	1110.5	1053.9	1024.4	1011.8
25°	1496.7	1459.0	1366.6	1242.8	1127.3	1041.3	988.8	961.5	948.9
27.5°	1425.3	1383.4	1291.0	1167.2	1053.9	971.9	923.7	898.5	888.0
30°	1337.2	1297.3	1207.1	1085.3	976.2	900.5	856.5	833.4	825.0
32.5°	1234.4	1200.8	1112.6	999.2	896.4	827.2	787.2	768.4	759.9
35°	1127.3	1095.8	1018.1	913.1	820.9	755.8	717.9	705.3	701.2
37.5°	1026.5	999.2	923.7	827.2	743.2	686.4	652.8	644.5	640.2
40°	921.6	902.7	833.4	745.2	667.5	617.2	589.9	583.6	583.6
42.5°	827.2	806.1	745.2	665.4	596.2	545.8	526.9	520.6	522.7
45°	741.1	720.0	663.4	589.9	522.7	480.7	466.0	466.0	466.0
47.5°	661.2	642.4	589.9	514.3	459.7	426.1	411.5	411.5	413.5
50°	587.7	575.2	516.4	451.3	403.1	371.6	361.0	359.0	363.2
52.5°	518.5	503.8	451.3	392.6	346.4	321.2	310.7	308.5	310.7
55°	459.7	443.0	396.8	340.1	298.1	272.9	260.3	258.2	262.5
57.5°	403.1	390.5	342.1	291.8	251.9	226.7	216.3	212.0	214.1
60°	350.6	338.0	293.9	245.6	210.0	184.8	170.1	165.8	167.9
62.5°	302.2	291.8	249.9	203.7	167.9	144.9	130.2	119.7	123.9
65°	258.2	247.7	210.0	163.8	132.3	107.1	86.1	77.7	79.8
67.5°	220.4	207.8	172.1	130.2	98.7	71.4	48.3	44.1	44.1
70°	182.6	170.1	138.6	100.7	69.2	37.8	21.0	21.0	21.0
72.5°	146.9	136.5	107.1	75.5	44.1	16.7	8.4	8.4	8.4
75°	113.4	105.0	79.8	52.5	27.3	8.4	6.3	4.2	4.2
77.5°	84.0	75.5	56.6	35.7	16.7	4.2	4.2	4.2	4.2
80°	56.6	50.4	37.8	21.0	8.4	2.1	2.1	2.1	2.1
82.5°	33.6	29.3	21.0	10.5	4.2	2.1	2.1	2.1	2.1
85°	16.7	12.6	8.4	4.2	2.1	2.1	2.1	2.1	2.1
87.5°	4.2	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)