

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: P580395

Luminaire Tested: **HC430D010-HM43040940-41RWWH**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P580395  
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: HC430D010-HM43040940-41RWWH  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, HAZE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2689.3 lumens  
Efficiency: N/A  
Efficacy: 96.0 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

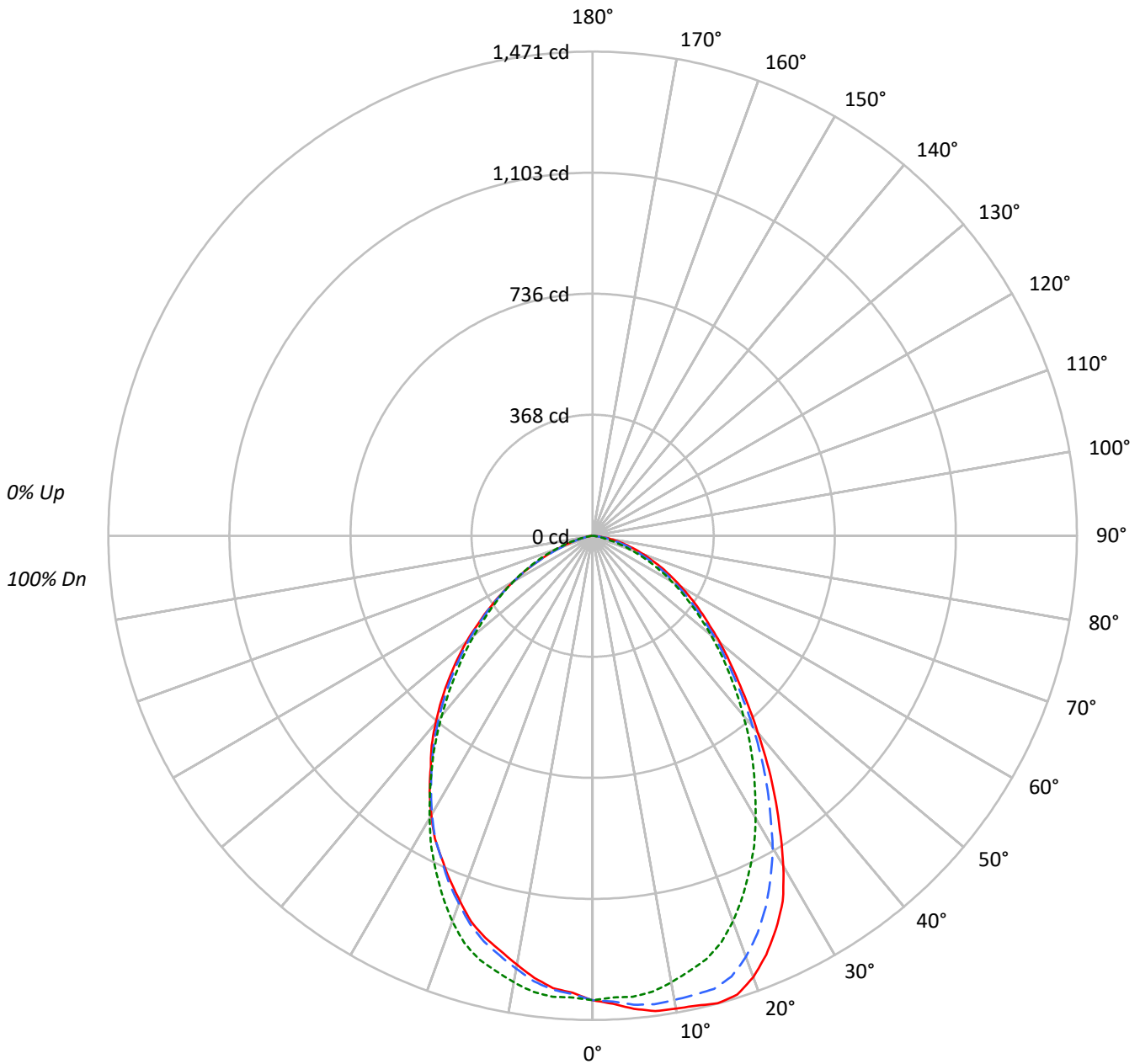
Input Watts (W): 28  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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

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

	0°	90°	180°
0°	174028	174028	174028
5°	178606	174049	170793
10°	182650	172542	165741
15°	187791	170105	161370
20°	187271	163578	154823
25°	179389	153150	147420
30°	165016	141046	139550
35°	145156	128006	129060
40°	125593	114595	119377
45°	109145	101801	107924
50°	96867	89805	95850
55°	85954	78793	82169
60°	76524	68309	68309
65°	68062	56796	53206
70°	58784	42988	37903
75°	49277	28404	23400
80°	37363	13709	12431
85°	19813	4953	4953



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	133.6	5.0
10°-20°	378.8	14.1
20°-30°	534.2	19.9
30°-40°	551.9	20.5
40°-50°	467.8	17.4
50°-60°	340.4	12.7
60°-70°	198.9	7.4
70°-80°	73.9	2.7
80°-90°	9.7	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°	1046.7	38.9
0°-40°	1598.6	59.4
0°-60°	2406.8	89.5
0°-90°	2689.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2689.3	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1411	1411	1411	1411	1411	
5°	1442	1430	1406	1385	1379	138
15°	1471	1425	1332	1276	1264	413
25°	1318	1244	1125	1085	1083	603
35°	964	922	850	852	857	602
45°	626	608	584	605	619	487
55°	400	380	366	379	382	359
65°	233	214	195	182	182	231
75°	103	86	60	47	49	111
85°	14	9	4	4	4	20
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°	1410.9	1410.9	1410.9	1410.9	1410.9	1410.9	1410.9	1410.9	1410.9
2.5°	1423.2	1419.7	1416.2	1410.9	1403.9	1398.7	1393.4	1389.9	1389.9
5°	1442.5	1437.2	1430.2	1417.9	1405.7	1395.2	1384.6	1379.4	1379.4
7.5°	1456.5	1449.5	1435.5	1417.9	1396.9	1381.1	1365.3	1358.3	1354.8
10°	1458.3	1451.3	1432.0	1405.7	1377.6	1353.1	1335.6	1325.1	1323.3
12.5°	1461.8	1453.0	1428.5	1391.6	1354.8	1325.1	1305.8	1295.3	1291.8
15°	1470.6	1458.3	1425.0	1377.6	1332.1	1297.0	1276.0	1267.2	1263.7
17.5°	1461.8	1444.3	1403.9	1347.8	1297.0	1258.5	1237.4	1228.6	1228.6
20°	1426.7	1409.2	1361.8	1300.5	1246.2	1209.3	1188.3	1183.0	1179.5
22.5°	1377.6	1358.3	1307.6	1242.7	1188.3	1155.1	1141.0	1134.0	1132.3
25°	1318.1	1298.8	1244.4	1177.9	1125.3	1097.2	1084.9	1084.9	1083.2
27.5°	1251.4	1226.9	1170.9	1113.0	1062.1	1041.1	1035.8	1035.8	1037.6
30°	1158.6	1141.0	1093.7	1037.6	990.3	976.3	976.3	979.8	979.8
32.5°	1058.6	1046.3	1004.3	955.2	918.4	909.6	913.1	920.2	921.9
35°	964.0	950.0	921.9	878.1	850.1	846.6	851.9	857.1	857.1
37.5°	871.2	857.1	837.8	802.8	781.7	783.5	790.5	797.5	802.8
40°	780.0	769.4	755.4	727.3	711.7	718.6	727.3	734.4	741.4
42.5°	699.4	688.9	678.3	657.3	646.8	655.5	666.1	673.1	680.1
45°	625.7	618.7	608.2	590.6	583.6	592.4	604.7	611.7	618.7
47.5°	562.6	559.1	545.0	529.4	525.8	534.6	545.0	553.8	559.1
50°	504.8	499.5	487.3	471.5	468.0	482.0	489.0	494.3	499.5
52.5°	448.7	443.4	429.4	415.4	415.4	425.9	431.1	432.9	438.2
55°	399.7	394.3	380.4	369.9	366.4	375.1	378.6	378.6	382.1
57.5°	354.1	348.8	334.8	322.5	320.8	326.0	326.0	326.0	327.8
60°	310.2	305.0	290.9	280.4	276.9	278.7	276.9	275.2	276.9
62.5°	269.9	264.6	250.6	238.3	234.8	234.8	229.7	227.9	229.7
65°	233.2	224.4	213.9	201.6	194.6	189.3	182.3	182.3	182.3
67.5°	196.3	189.3	177.0	164.8	156.0	147.2	136.7	140.2	142.0
70°	163.0	157.7	143.7	131.4	119.2	108.6	99.9	103.4	105.1
72.5°	133.2	126.2	113.9	99.9	89.3	75.4	70.2	73.7	73.7
75°	103.4	96.4	85.8	71.9	59.6	47.4	47.4	49.1	49.1
77.5°	77.2	70.2	59.6	47.4	36.8	28.1	29.8	29.8	29.8
80°	52.6	47.4	38.6	28.1	19.3	15.8	15.8	15.8	17.5
82.5°	29.8	26.3	21.0	14.0	8.8	8.8	8.8	8.8	8.8
85°	14.0	10.5	8.8	5.3	3.5	3.5	3.5	3.5	3.5
87.5°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
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)