

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: P580488

Luminaire Tested: **HC435D010-HM43040927-41WWWB**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P580488  
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-HM43040927-41WWWB  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, BLACK BAFFLE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

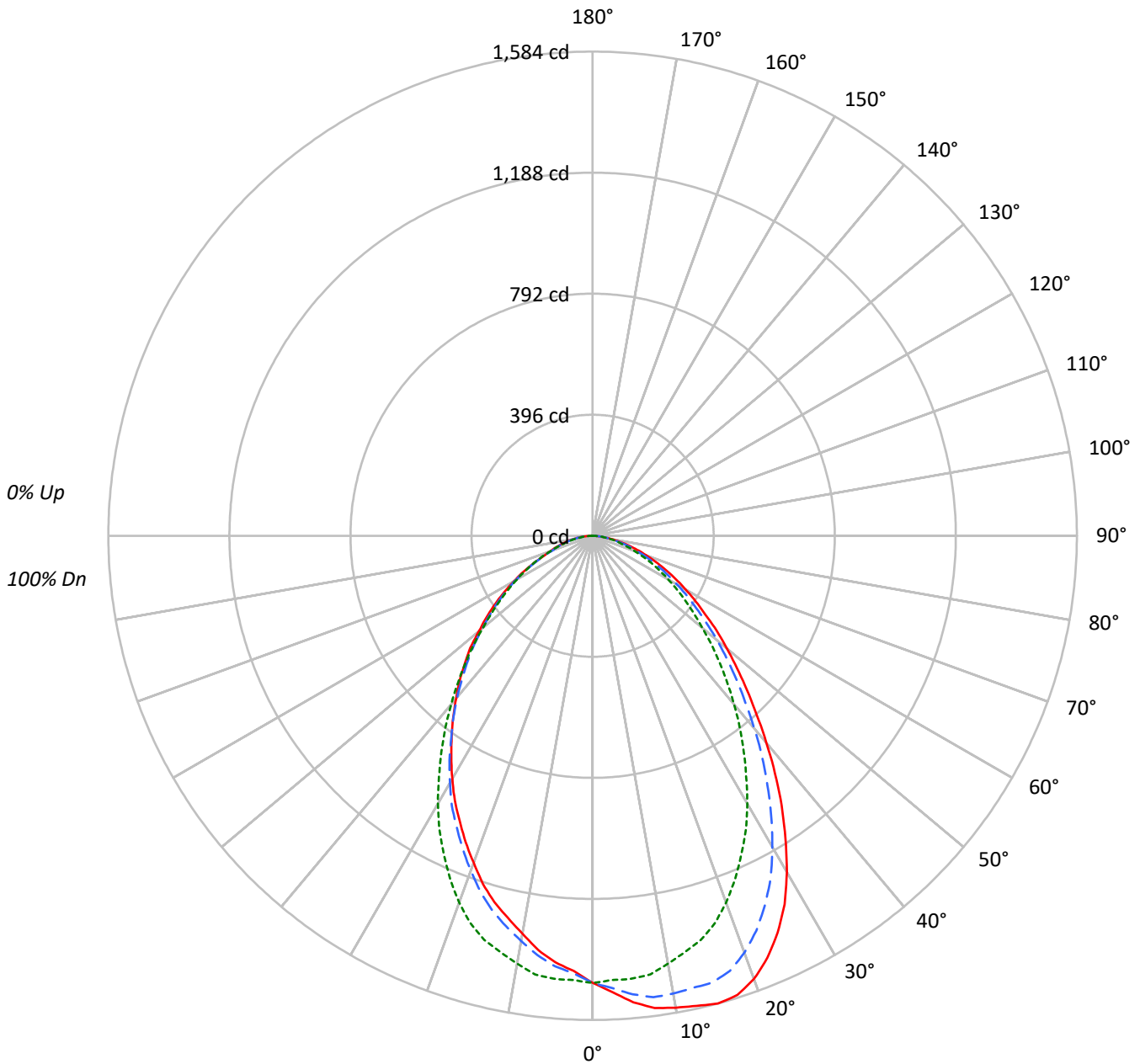
Lumens per Lamp: N/A  
Luminaire Lumens: 2836.3 lumens  
Efficiency: N/A  
Efficacy: 84.2 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.07 / 1.15  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 33.7  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage 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			100
1	110	106	103	99	108	104	101	98	100	97	95	96	94	92	92	91	89	87			87
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	75			75
3	94	85	77	72	92	83	76	71	80	75	70	78	73	69	75	71	68	66			66
4	87	76	68	62	85	75	68	62	72	66	61	70	65	60	68	63	60	58			58
5	81	69	61	55	79	68	60	55	66	59	54	64	58	53	62	57	53	51			51
6	75	63	55	49	73	62	54	49	60	53	48	59	53	48	57	52	47	46			46
7	70	58	50	44	68	57	49	44	55	48	43	54	48	43	53	47	43	41			41
8	65	53	45	40	64	52	45	40	51	44	39	50	44	39	49	43	39	37			37
9	61	49	41	36	60	48	41	36	47	41	36	46	40	36	45	40	36	34			34
10	58	45	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°	180393	180393	180393
5°	189687	180153	173405
10°	196339	178003	165541
15°	202336	174766	158472
20°	202576	167569	149336
25°	194945	156634	140016
30°	181025	144122	130762
35°	162262	129767	120989
40°	142387	115771	111842
45°	124443	102499	103145
50°	109877	89709	92933
55°	96900	79524	83567
60°	86589	70406	73169
65°	76701	61904	61904
70°	67043	52834	52834
75°	57284	44750	50088
80°	45318	39991	45318
85°	29295	34532	42457



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	138.6	4.9
10°-20°	390.2	13.8
20°-30°	546.7	19.3
30°-40°	563.2	19.9
40°-50°	479.5	16.9
50°-60°	355.3	12.5
60°-70°	223.0	7.9
70°-80°	110.8	3.9
80°-90°	29.1	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°	1075.4	37.9
0°-40°	1638.7	57.8
0°-60°	2473.4	87.2
0°-90°	2836.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2836.3	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1462	1462	1462	1462	1462	
5°	1532	1506	1455	1414	1400	147
15°	1584	1513	1369	1269	1241	446
25°	1432	1333	1151	1051	1029	655
35°	1078	997	862	806	804	672
45°	713	665	588	576	591	554
55°	451	415	370	377	389	407
65°	263	237	212	208	212	262
75°	120	107	94	101	105	128
85°	21	21	24	28	30	27
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°	1462.5	1462.5	1462.5	1462.5	1462.5	1462.5	1462.5	1462.5	1462.5
2.5°	1494.4	1488.7	1481.3	1468.2	1455.0	1443.8	1432.4	1426.8	1424.9
5°	1532.0	1520.7	1505.7	1481.3	1455.0	1432.4	1413.7	1404.3	1400.5
7.5°	1558.2	1547.0	1522.6	1485.0	1447.5	1413.7	1383.6	1370.5	1366.8
10°	1567.6	1554.5	1520.7	1470.0	1421.2	1379.9	1346.1	1329.2	1321.7
12.5°	1575.2	1558.2	1515.0	1455.0	1394.9	1344.2	1308.6	1286.0	1280.3
15°	1584.5	1565.7	1513.2	1440.0	1368.6	1308.6	1269.1	1248.4	1241.0
17.5°	1575.2	1554.5	1492.6	1409.9	1329.2	1263.5	1220.3	1201.6	1194.0
20°	1543.3	1520.7	1451.2	1363.0	1276.6	1209.1	1165.8	1147.0	1137.7
22.5°	1494.4	1470.0	1398.7	1304.7	1216.5	1150.9	1109.5	1090.7	1085.1
25°	1432.4	1408.0	1333.0	1237.2	1150.9	1087.0	1051.4	1034.4	1028.8
27.5°	1359.3	1334.9	1261.6	1167.7	1085.1	1025.1	996.9	980.0	976.2
30°	1271.0	1246.6	1175.3	1088.9	1011.9	955.6	933.0	919.9	918.1
32.5°	1173.3	1152.8	1087.0	1008.1	934.9	888.0	871.1	861.8	859.9
35°	1077.6	1055.1	996.9	925.6	861.8	820.4	805.5	803.5	803.5
37.5°	980.0	957.4	910.6	844.8	790.4	752.9	747.2	749.0	749.0
40°	884.3	863.6	822.3	767.8	719.0	690.9	689.0	692.7	694.6
42.5°	794.1	777.2	739.7	692.7	651.5	628.9	630.8	638.3	643.9
45°	713.4	698.3	664.6	623.3	587.6	570.8	576.4	585.7	591.3
47.5°	640.2	627.1	595.2	557.6	527.6	516.3	523.8	535.0	542.6
50°	572.6	561.3	531.3	491.9	467.5	459.9	469.4	480.6	484.3
52.5°	512.5	501.3	469.4	435.6	416.8	413.1	422.4	431.8	437.5
55°	450.6	441.2	414.9	384.9	369.8	368.0	377.3	384.9	388.6
57.5°	399.9	390.5	366.1	339.8	326.6	324.8	334.2	339.8	341.7
60°	351.0	341.7	319.1	294.7	285.4	285.4	291.0	294.7	296.6
62.5°	306.1	296.6	275.9	255.4	247.8	247.8	247.8	249.6	255.4
65°	262.8	255.4	236.6	217.8	212.1	208.4	208.4	208.4	212.1
67.5°	223.5	215.9	200.9	184.0	178.4	172.8	170.8	174.6	174.6
70°	185.9	180.2	165.2	152.1	146.5	140.8	138.9	146.5	146.5
72.5°	152.1	146.5	137.0	123.9	118.2	116.4	120.2	123.9	125.8
75°	120.2	114.5	107.0	99.5	93.9	95.8	101.4	103.3	105.1
77.5°	90.1	88.2	80.7	75.1	75.1	77.0	80.7	84.5	86.3
80°	63.8	61.9	58.2	54.4	56.3	60.0	61.9	65.8	63.8
82.5°	39.5	39.5	37.5	37.5	39.5	43.2	45.1	47.0	48.8
85°	20.7	20.7	20.7	22.5	24.4	26.3	28.2	30.0	30.0
87.5°	5.6	7.5	7.5	9.4	11.2	11.2	13.2	13.2	13.2
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)