

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: P580020

Luminaire Tested: **HC420D010-HM40525835-41WWWB**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P580020
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: HC420D010-HM40525835-41WWWB
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, BLACK BAFFLE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2051.6 lumens
Efficiency: N/A
Efficacy: 102.6 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

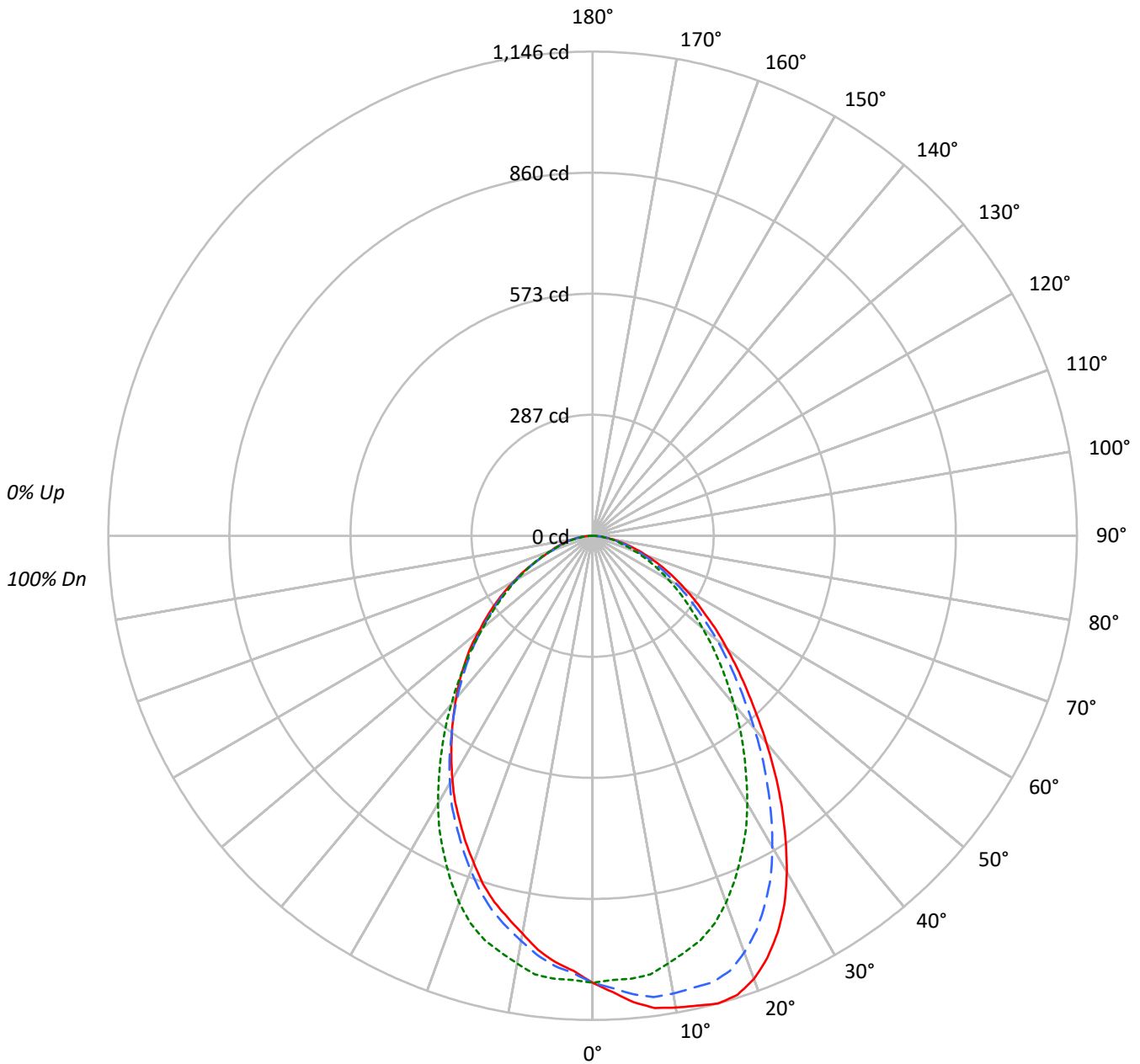
Input Watts (W): 20
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	130487	130487	130487
5°	137201	130317	125426
10°	142019	128768	119738
15°	146366	126420	114621
20°	146527	121207	108028
25°	141024	113301	101283
30°	130933	104257	94586
35°	117375	93855	87515
40°	102986	83761	80911
45°	90010	74153	74607
50°	79482	64879	67239
55°	70105	57525	60450
60°	62635	50942	52940
65°	55512	44801	44801
70°	48470	38192	38192
75°	41414	32359	36219
80°	32817	28910	32817
85°	21087	25050	30711



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	100.2	4.9
10°-20°	282.3	13.8
20°-30°	395.4	19.3
30°-40°	407.4	19.9
40°-50°	346.8	16.9
50°-60°	257.0	12.5
60°-70°	161.3	7.9
70°-80°	80.1	3.9
80°-90°	21.0	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°	777.9	37.9
0°-40°	1185.3	57.8
0°-60°	1789.2	87.2
0°-90°	2051.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2051.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1058	1058	1058	1058	1058	
5°	1108	1089	1052	1023	1013	107
15°	1146	1095	990	918	898	322
25°	1036	964	832	760	744	474
35°	780	721	623	583	581	486
45°	516	481	425	417	428	400
55°	326	300	268	273	281	295
65°	190	171	154	151	154	190
75°	87	77	68	73	76	93
85°	15	15	18	20	22	19
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°	1057.9	1057.9	1057.9	1057.9	1057.9	1057.9	1057.9	1057.9	1057.9
2.5°	1080.9	1076.9	1071.4	1062.0	1052.5	1044.3	1036.2	1032.1	1030.7
5°	1108.1	1100.0	1089.1	1071.4	1052.5	1036.2	1022.6	1015.8	1013.0
7.5°	1127.2	1119.0	1101.3	1074.2	1047.0	1022.6	1000.9	991.4	988.6
10°	1133.9	1124.4	1100.0	1063.3	1028.1	998.1	973.7	961.4	956.0
12.5°	1139.3	1127.2	1096.0	1052.5	1009.0	972.3	946.5	930.2	926.2
15°	1146.2	1132.5	1094.6	1041.6	990.0	946.5	918.1	903.0	897.6
17.5°	1139.3	1124.4	1079.7	1019.9	961.4	913.9	882.7	869.1	863.7
20°	1116.3	1100.0	1049.7	986.0	923.4	874.6	843.3	829.7	823.0
22.5°	1080.9	1063.3	1011.8	943.9	880.0	832.5	802.6	789.0	784.9
25°	1036.2	1018.5	964.2	894.9	832.5	786.3	760.5	748.3	744.2
27.5°	983.2	965.5	912.6	844.7	784.9	741.4	721.1	708.8	706.2
30°	919.3	901.8	850.2	787.6	732.0	691.2	674.9	665.4	664.1
32.5°	848.8	833.9	786.3	729.3	676.3	642.3	630.2	623.3	622.0
35°	779.5	763.2	721.1	669.5	623.3	593.5	582.6	581.2	581.2
37.5°	708.8	692.6	658.6	611.1	571.7	544.6	540.5	541.8	541.8
40°	639.6	624.7	594.8	555.4	520.2	499.7	498.4	501.1	502.5
42.5°	574.4	562.3	535.1	501.1	471.2	454.9	456.3	461.7	465.8
45°	516.0	505.1	480.7	450.9	425.1	412.8	416.9	423.7	427.7
47.5°	463.0	453.5	430.5	403.3	381.6	373.5	378.9	387.0	392.5
50°	414.2	406.0	384.4	355.8	338.1	332.7	339.5	347.7	350.4
52.5°	370.7	362.6	339.5	315.1	301.4	298.8	305.6	312.3	316.5
55°	326.0	319.1	300.2	278.4	267.5	266.2	273.0	278.4	281.1
57.5°	289.3	282.5	264.8	245.8	236.3	234.9	241.7	245.8	247.2
60°	253.9	247.2	230.9	213.2	206.5	206.5	210.5	213.2	214.6
62.5°	221.4	214.6	199.6	184.7	179.3	179.3	179.3	180.7	184.7
65°	190.2	184.7	171.1	157.5	153.5	150.7	150.7	150.7	153.5
67.5°	161.6	156.2	145.3	133.1	129.0	124.9	123.5	126.3	126.3
70°	134.4	130.4	119.5	110.0	105.9	101.9	100.5	105.9	105.9
72.5°	110.0	105.9	99.1	89.6	85.6	84.2	86.9	89.6	91.0
75°	86.9	82.8	77.4	72.0	67.9	69.3	73.3	74.7	76.0
77.5°	65.1	63.8	58.4	54.4	54.4	55.6	58.4	61.1	62.5
80°	46.2	44.8	42.1	39.3	40.7	43.5	44.8	47.5	46.2
82.5°	28.6	28.6	27.2	27.2	28.6	31.2	32.6	34.0	35.3
85°	14.9	14.9	14.9	16.3	17.7	19.0	20.4	21.7	21.7
87.5°	4.1	5.4	5.4	6.8	8.1	8.1	9.5	9.5	9.5
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)