

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: P580091

Luminaire Tested: **HC420D010-HM40525935-41WWW**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P580091
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-16)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 9/9/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HC420D010-HM40525935-41WWW
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1840.7 lumens
Efficiency: N/A
Efficacy: 92.0 lumens/watt
Spacing Criteria (0/90/45): 1.06 / 1.03 / 1.1
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

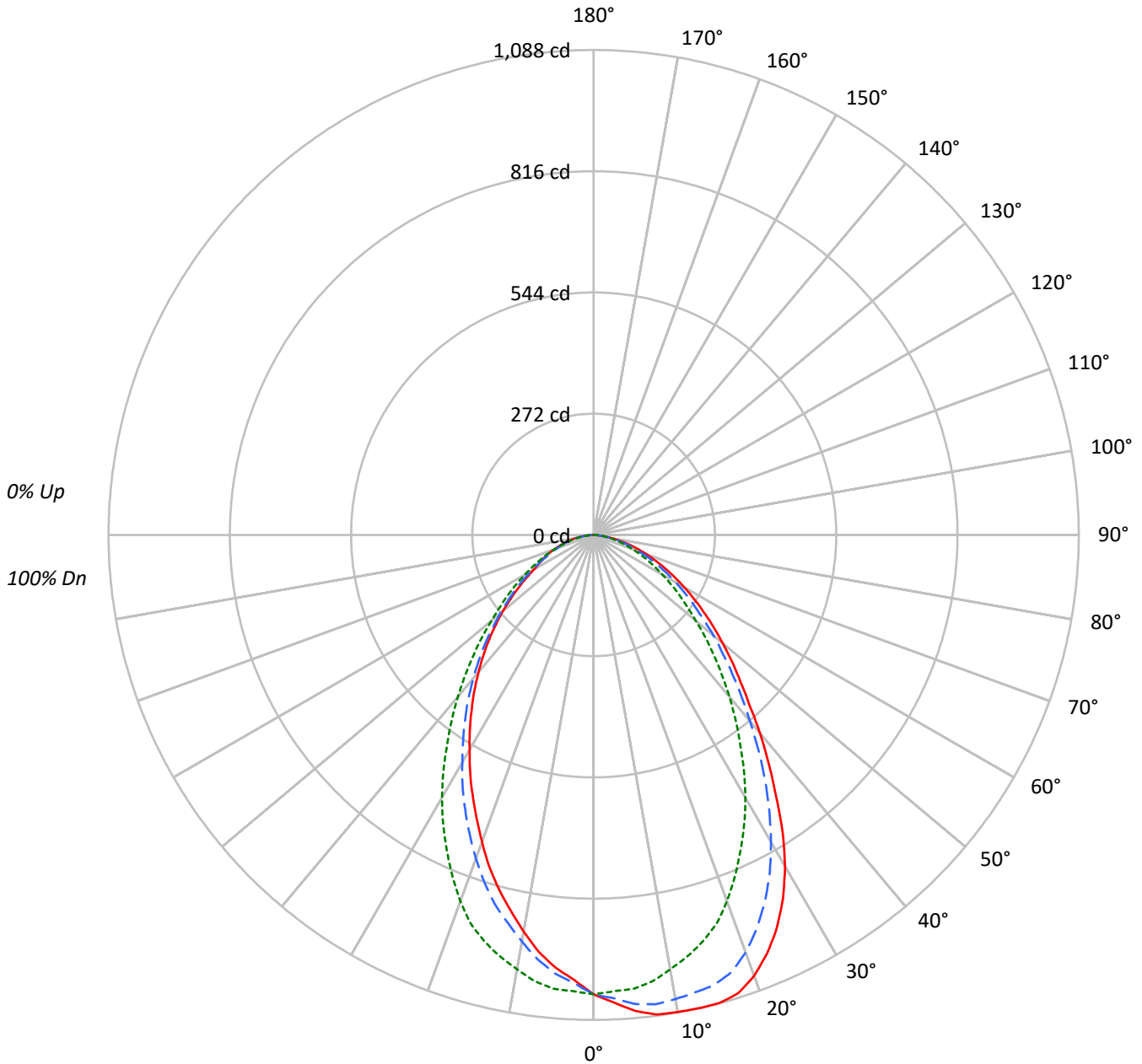
Input Watts (W): 20
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
RC	80									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	106	103	100	108	104	101	98	100	97	95	96	94	92	93	91	89	87																			
2	102	95	89	84	100	93	88	83	90	85	81	87	83	80	84	81	78	76																			
3	94	85	78	72	92	84	77	72	81	75	71	78	73	69	76	72	68	66																			
4	87	77	69	63	85	76	68	63	73	67	62	71	66	61	69	64	60	58																			
5	81	70	62	56	79	69	61	56	67	60	55	65	59	54	63	58	54	52																			
6	76	64	56	50	74	63	55	50	61	54	49	59	53	49	58	53	48	47																			
7	71	58	50	45	69	58	50	45	56	49	44	55	49	44	53	48	44	42																			
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38																			
9	62	50	42	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35																			
10	59	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	127132	127132	127132
5°	132732	126566	120721
10°	136095	123933	113149
15°	138896	120635	104992
20°	138166	114775	96149
25°	132354	106115	87469
30°	122274	96893	79275
35°	107181	86190	71765
40°	93341	76145	64616
45°	81235	66426	57739
50°	72362	57241	50947
55°	64664	50321	44085
60°	57726	43960	37990
65°	51309	38555	36074
70°	45044	33215	33684
75°	38173	28308	31215
80°	29265	24151	28413
85°	17266	18823	24059



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	96.6	5.2
10°-20°	266.5	14.5
20°-30°	364.1	19.8
30°-40°	365.6	19.9
40°-50°	302.5	16.4
50°-60°	219.2	11.9
60°-70°	138.8	7.5
70°-80°	70.2	3.8
80°-90°	17.2	0.9
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°	727.2	39.5
0°-40°	1092.9	59.4
0°-60°	1614.5	87.7
0°-90°	1840.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1840.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1031	1031	1031	1031	1031	
5°	1072	1056	1022	988	975	103
15°	1088	1045	945	857	822	306
25°	972	908	780	682	643	444
35°	712	669	572	502	477	446
45°	466	439	381	343	331	362
55°	301	274	234	214	205	270
65°	176	156	132	119	124	175
75°	80	69	59	62	66	85
85°	12	12	13	16	17	17
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°	1030.7	1030.7	1030.7	1030.7	1030.7	1030.7	1030.7	1030.7	1030.7
2.5°	1050.2	1046.5	1040.4	1033.2	1024.7	1015.0	1006.5	1001.7	999.3
5°	1072.0	1067.2	1056.3	1040.4	1022.2	1004.1	988.3	978.6	975.0
7.5°	1085.3	1078.1	1062.2	1038.0	1010.2	983.4	960.4	947.1	943.4
10°	1086.6	1078.1	1057.4	1024.7	989.5	954.3	926.4	907.0	903.4
12.5°	1087.7	1076.8	1051.3	1012.6	968.9	925.3	891.3	868.3	862.2
15°	1087.7	1076.8	1045.3	999.3	944.7	894.9	857.4	830.7	822.2
17.5°	1078.1	1065.9	1028.3	975.0	915.5	859.8	816.1	788.2	779.7
20°	1052.6	1039.2	996.7	938.6	874.4	816.1	772.5	743.4	732.5
22.5°	1016.2	1000.4	955.6	892.5	828.2	768.8	726.4	696.1	686.4
25°	972.5	956.8	908.3	846.4	779.7	724.0	681.5	653.6	642.7
27.5°	919.2	902.2	854.9	793.0	731.2	675.5	636.6	611.1	600.2
30°	858.5	840.4	795.4	736.0	680.3	627.0	589.3	568.7	556.6
32.5°	788.2	772.5	732.5	679.1	627.0	576.0	544.5	526.2	516.6
35°	711.8	703.3	669.4	623.3	572.4	529.9	502.0	485.1	476.6
37.5°	643.9	635.4	606.3	567.5	522.7	483.8	460.7	446.3	439.0
40°	579.7	572.4	544.5	511.8	472.9	439.0	419.6	408.7	401.3
42.5°	516.6	512.9	489.9	459.6	425.7	396.5	380.8	372.3	366.2
45°	465.7	460.7	439.0	409.8	380.8	356.5	343.2	337.1	331.0
47.5°	420.8	414.8	391.7	366.2	339.5	317.7	305.6	299.5	297.1
50°	377.1	371.1	350.4	324.9	298.3	282.5	272.9	266.8	265.5
52.5°	338.4	332.3	309.2	284.9	264.4	251.0	242.5	236.5	234.0
55°	300.7	293.5	274.0	251.0	234.0	221.9	213.5	207.4	205.0
57.5°	266.8	259.5	242.5	220.7	205.0	194.1	186.7	180.7	178.2
60°	234.0	228.0	212.2	191.5	178.2	168.6	161.3	156.5	154.0
62.5°	203.7	198.9	183.1	164.9	154.0	145.6	139.5	134.7	137.1
65°	175.8	171.0	156.5	140.6	132.1	123.6	118.8	118.8	123.6
67.5°	149.1	144.3	132.1	118.8	111.6	105.5	101.9	105.5	109.2
70°	124.9	120.1	109.2	98.2	92.1	87.3	87.3	91.0	93.4
72.5°	101.9	97.0	88.5	80.1	75.1	71.6	75.1	77.7	80.1
75°	80.1	76.4	69.2	63.1	59.4	58.2	61.8	64.2	65.5
77.5°	59.4	57.0	52.2	47.3	44.8	46.1	49.7	50.9	52.2
80°	41.2	40.0	36.4	34.0	34.0	35.2	37.6	38.8	40.0
82.5°	25.5	25.5	23.1	21.8	23.1	25.5	26.7	27.9	27.9
85°	12.2	13.3	12.2	12.2	13.3	15.7	15.7	17.0	17.0
87.5°	3.7	3.7	4.8	4.8	6.1	6.1	6.1	6.1	7.2
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)