

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: P592654

Luminaire Tested: **HC415D010-HM40525950-41WWW**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P592654
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: HC415D010-HM40525950-41WWW
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 5000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1402.3 lumens
Efficiency: N/A
Efficacy: 100.2 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

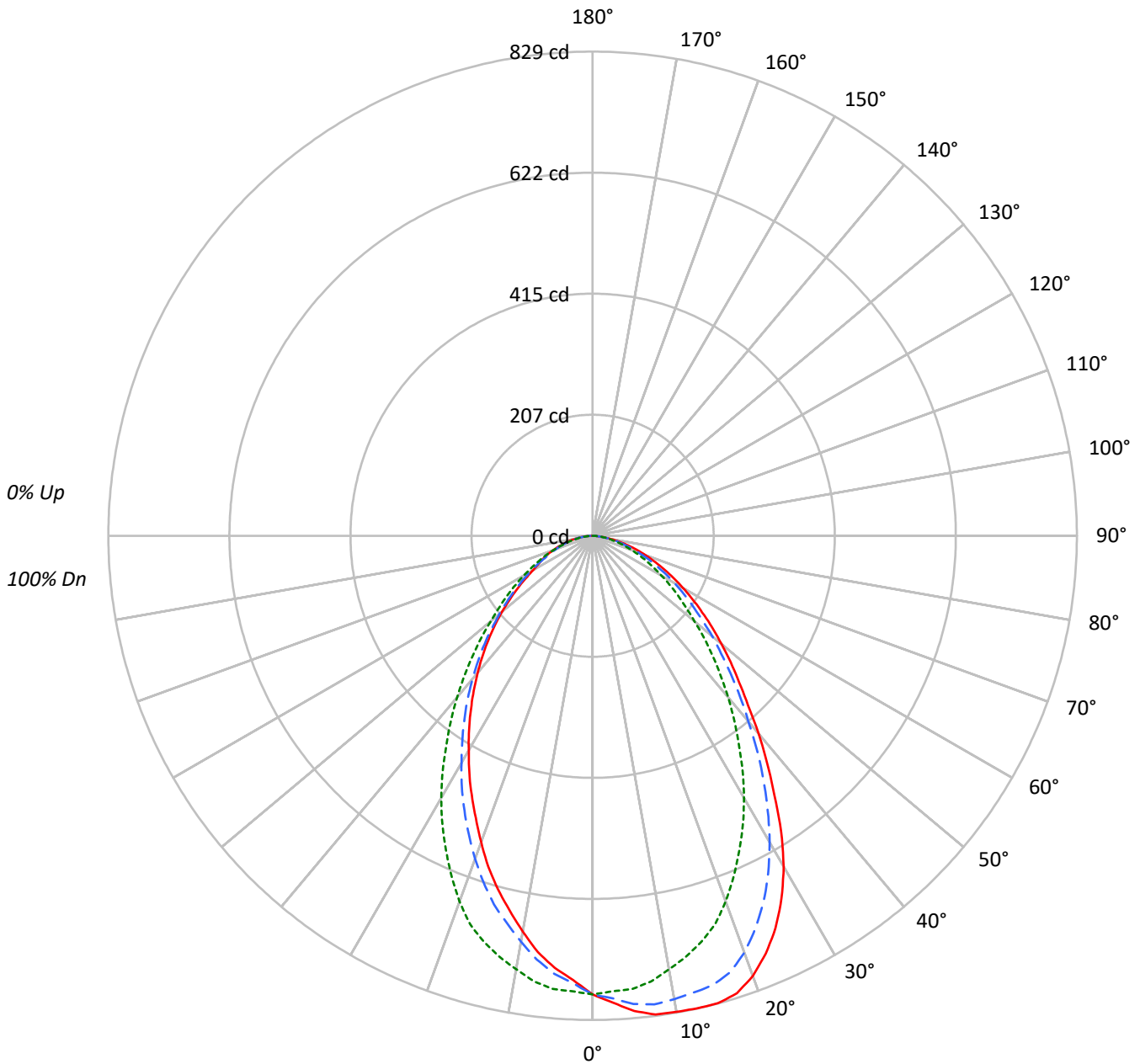
Input Watts (W): 14
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
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°	96863	96863	96863
5°	101121	96429	91971
10°	103668	94412	86196
15°	105810	91903	79989
20°	105259	87433	73244
25°	100848	80855	66633
30°	93162	73806	60403
35°	81658	65652	54660
40°	71105	58014	49223
45°	61873	50587	43993
50°	55130	43617	38820
55°	49267	38343	33569
60°	43985	33501	28937
65°	39080	29390	27522
70°	34333	25353	25677
75°	29023	21589	23781
80°	22304	18397	21665
85°	13020	14294	18398



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	73.6	5.2
10°-20°	203.0	14.5
20°-30°	277.4	19.8
30°-40°	278.5	19.9
40°-50°	230.4	16.4
50°-60°	167.0	11.9
60°-70°	105.8	7.5
70°-80°	53.5	3.8
80°-90°	13.1	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°	554.0	39.5
0°-40°	832.6	59.4
0°-60°	1230.0	87.7
0°-90°	1402.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1402.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	785	785	785	785	785	
5°	817	805	779	753	743	78
15°	829	796	720	653	626	233
25°	741	692	594	519	490	339
35°	542	510	436	382	363	340
45°	355	334	290	261	252	276
55°	229	209	178	163	156	206
65°	134	119	101	90	94	133
75°	61	53	45	47	50	65
85°	9	9	10	12	13	13
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°	785.3	785.3	785.3	785.3	785.3	785.3	785.3	785.3	785.3
2.5°	800.1	797.3	792.7	787.1	780.7	773.3	766.8	763.2	761.2
5°	816.7	813.0	804.7	792.7	778.8	765.0	752.9	745.5	742.8
7.5°	826.8	821.3	809.3	790.8	769.5	749.3	731.7	721.5	718.8
10°	827.7	821.3	805.6	780.7	753.8	727.1	705.8	691.1	688.2
12.5°	828.6	820.3	801.0	771.5	738.1	704.9	679.0	661.5	656.8
15°	828.6	820.3	796.4	761.2	719.7	681.9	653.2	632.9	626.4
17.5°	821.3	812.0	783.4	742.8	697.5	655.0	621.7	600.4	594.1
20°	801.9	791.7	759.4	715.1	666.1	621.7	588.5	566.3	558.0
22.5°	774.2	762.1	728.0	679.9	631.0	585.7	553.4	530.3	522.9
25°	741.0	728.9	692.0	644.8	594.1	551.6	519.2	498.0	489.6
27.5°	700.3	687.3	651.3	604.2	557.1	514.6	485.0	465.6	457.3
30°	654.1	640.2	606.0	560.8	518.2	477.7	449.0	433.3	424.1
32.5°	600.4	588.5	558.0	517.3	477.7	438.9	414.8	400.9	393.5
35°	542.3	535.9	509.9	474.8	436.0	403.7	382.5	369.5	363.0
37.5°	490.6	484.1	462.0	432.4	398.2	368.6	351.1	340.0	334.4
40°	441.6	436.0	414.8	389.9	360.3	334.4	319.6	311.3	305.7
42.5°	393.5	390.8	373.3	350.2	324.3	302.1	290.0	283.6	279.0
45°	354.7	351.1	334.4	312.2	290.0	271.6	261.4	256.8	252.2
47.5°	320.5	316.0	298.3	279.0	258.7	242.1	232.9	228.2	226.4
50°	287.3	282.7	267.0	247.6	227.3	215.2	207.8	203.3	202.3
52.5°	257.8	253.1	235.6	217.1	201.4	191.2	184.8	180.1	178.3
55°	229.1	223.5	208.8	191.2	178.3	169.1	162.6	157.9	156.1
57.5°	203.3	197.7	184.8	168.2	156.1	147.8	142.2	137.7	135.8
60°	178.3	173.7	161.7	146.0	135.8	128.4	122.9	119.2	117.3
62.5°	155.2	151.6	139.5	125.6	117.3	110.9	106.2	102.6	104.4
65°	133.9	130.3	119.2	107.2	100.7	94.3	90.5	90.5	94.3
67.5°	113.6	109.9	100.7	90.5	85.0	80.4	77.7	80.4	83.1
70°	95.2	91.4	83.1	74.8	70.3	66.5	66.5	69.2	71.2
72.5°	77.7	73.9	67.4	60.9	57.3	54.5	57.3	59.1	60.9
75°	60.9	58.2	52.6	48.1	45.3	44.3	47.1	49.0	49.9
77.5°	45.3	43.4	39.7	36.0	34.2	35.1	37.9	38.8	39.7
80°	31.4	30.5	27.7	25.9	25.9	26.8	28.7	29.6	30.5
82.5°	19.4	19.4	17.5	16.6	17.5	19.4	20.4	21.3	21.3
85°	9.2	10.1	9.2	9.2	10.1	12.1	12.1	13.0	13.0
87.5°	2.7	2.7	3.8	3.8	4.7	4.7	4.7	4.7	5.6
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)