

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: P579736

Luminaire Tested: **HC410D010-HM40525835-41WWW**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P579736  
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: HC410D010-HM40525835-41WWW  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

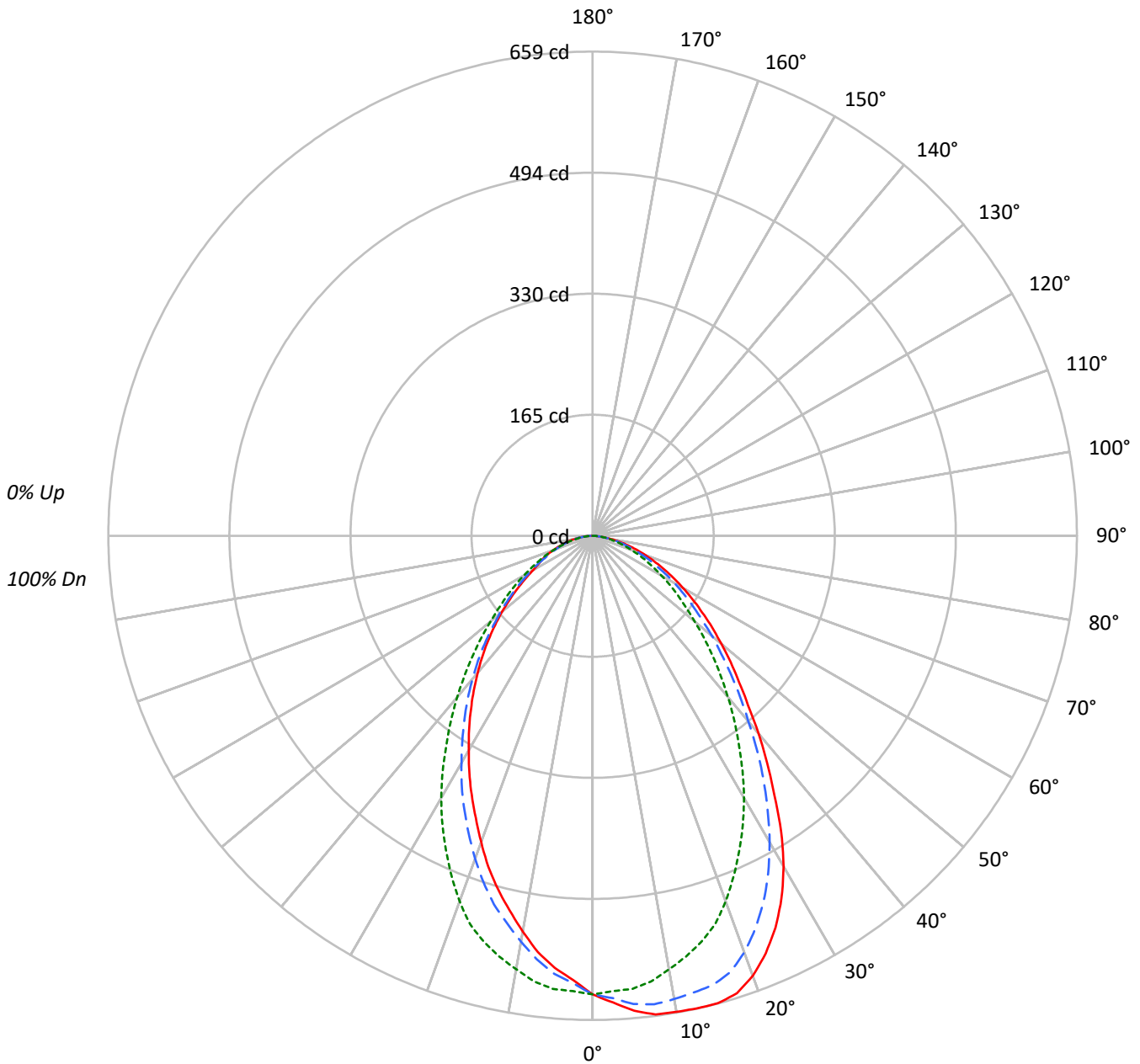
Lumens per Lamp: N/A  
Luminaire Lumens: 1114.6 lumens  
Efficiency: N/A  
Efficacy: 112.6 lumens/watt  
Spacing Criteria (0/90/45): 1.06 / 1.03 / 1.1  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 9.9  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage 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	106	103	100	108	104	101	98	100	97	95	96	94	92	93	91	89	87	87	87	87
2	102	95	89	84	100	93	88	83	90	85	81	87	83	80	84	81	78	76	76	76	76
3	94	85	78	72	92	84	77	72	81	75	71	78	73	69	76	72	68	66	66	66	66
4	87	77	69	63	85	76	68	63	73	67	62	71	66	61	69	64	60	58	58	58	58
5	81	70	62	56	79	69	61	56	67	60	55	65	59	54	63	58	54	52	52	52	52
6	76	64	56	50	74	63	55	50	61	54	49	59	53	49	58	53	48	47	47	47	47
7	71	58	50	45	69	58	50	45	56	49	44	55	49	44	53	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	42	37	47	41	37	46	41	37	35	35	35	35
10	59	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°	76980	76980	76980
5°	80369	76643	73101
10°	82401	75049	68511
15°	84114	73043	63580
20°	83666	69490	58215
25°	80147	64265	52969
30°	74034	58680	48012
35°	64914	52190	43457
40°	56517	46099	39143
45°	49191	40225	34957
50°	43828	34656	30856
55°	39160	30472	26666
60°	34956	26618	22992
65°	31083	23349	21860
70°	27300	20124	20412
75°	23114	17157	18872
80°	17687	14633	17190
85°	10473	11463	14435



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	58.5	5.2
10°-20°	161.4	14.5
20°-30°	220.5	19.8
30°-40°	221.4	19.9
40°-50°	183.2	16.4
50°-60°	132.7	11.9
60°-70°	84.1	7.5
70°-80°	42.5	3.8
80°-90°	10.4	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°	440.4	39.5
0°-40°	661.8	59.4
0°-60°	977.6	87.7
0°-90°	1114.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1114.6	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	624	624	624	624	624	
5°	649	640	619	598	590	62
15°	659	633	572	519	498	185
25°	589	550	472	413	389	269
35°	431	405	347	304	289	270
45°	282	266	231	208	200	219
55°	182	166	142	129	124	164
65°	106	95	80	72	75	106
75°	48	42	36	37	40	52
85°	7	7	8	10	10	10
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°	624.1	624.1	624.1	624.1	624.1	624.1	624.1	624.1	624.1
2.5°	635.9	633.6	630.0	625.6	620.4	614.6	609.4	606.6	605.1
5°	649.1	646.2	639.6	630.0	619.0	608.0	598.5	592.6	590.4
7.5°	657.2	652.8	643.2	628.5	611.7	595.5	581.5	573.4	571.3
10°	657.9	652.8	640.2	620.4	599.2	577.9	561.0	549.2	547.0
12.5°	658.7	652.1	636.6	613.2	586.6	560.2	539.6	525.8	522.1
15°	658.7	652.1	633.0	605.1	572.0	541.9	519.2	503.0	497.9
17.5°	652.8	645.5	622.7	590.4	554.4	520.6	494.1	477.3	472.2
20°	637.4	629.3	603.6	568.3	529.4	494.1	467.7	450.1	443.5
22.5°	615.3	605.8	578.6	540.4	501.5	465.6	439.8	421.5	415.6
25°	588.9	579.4	550.0	512.6	472.2	438.4	412.6	395.8	389.2
27.5°	556.6	546.4	517.7	480.2	442.8	409.0	385.4	370.1	363.5
30°	519.8	508.8	481.7	445.8	412.0	379.6	356.9	344.4	337.1
32.5°	477.3	467.7	443.5	411.2	379.6	348.8	329.7	318.6	312.8
35°	431.1	425.8	405.4	377.5	346.6	320.9	304.0	293.7	288.6
37.5°	389.9	384.8	367.1	343.7	316.5	292.9	279.0	270.2	265.8
40°	351.0	346.6	329.7	309.9	286.3	265.8	254.1	247.4	243.1
42.5°	312.8	310.6	296.7	278.2	257.8	240.1	230.6	225.4	221.8
45°	282.0	279.0	265.8	248.2	230.6	215.9	207.8	204.2	200.4
47.5°	254.8	251.2	237.2	221.8	205.6	192.4	185.0	181.4	179.9
50°	228.4	224.6	212.2	196.8	180.6	171.0	165.2	161.6	160.8
52.5°	204.8	201.2	187.2	172.5	160.1	152.0	146.8	143.2	141.7
55°	182.1	177.6	165.9	152.0	141.7	134.4	129.3	125.5	124.0
57.5°	161.6	157.2	146.8	133.6	124.0	117.4	113.1	109.4	107.9
60°	141.7	138.0	128.5	116.0	107.9	102.1	97.6	94.7	93.2
62.5°	123.4	120.4	110.8	99.9	93.2	88.1	84.4	81.5	83.0
65°	106.5	103.6	94.7	85.1	80.0	74.9	71.9	71.9	74.9
67.5°	90.4	87.4	80.0	71.9	67.6	63.8	61.7	63.8	66.1
70°	75.7	72.7	66.1	59.5	55.8	52.9	52.9	55.1	56.6
72.5°	61.7	58.7	53.6	48.5	45.5	43.4	45.5	47.0	48.5
75°	48.5	46.2	41.9	38.2	36.0	35.3	37.4	38.9	39.6
77.5°	36.0	34.5	31.5	28.7	27.2	27.9	30.2	30.8	31.5
80°	24.9	24.2	22.1	20.6	20.6	21.3	22.8	23.4	24.2
82.5°	15.4	15.4	14.0	13.2	14.0	15.4	16.2	16.8	16.8
85°	7.4	8.1	7.4	7.4	8.1	9.6	9.6	10.2	10.2
87.5°	2.2	2.2	3.0	3.0	3.6	3.6	3.6	3.6	4.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



Report Generated By 670245859 / DESKTOP-HRDQ47P







— 0°-180°    - - 45°-225°    - - - - 90°-270°







(END OF REPORT)