

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: P579877

Luminaire Tested: **HC415D010-HM40525835-41RWWC**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P579877  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-14)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/9/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HC415D010-HM40525835-41RWWC  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, SPECULAR TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1539.4 lumens  
Efficiency: N/A  
Efficacy: 110.0 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.15 / 1.21  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

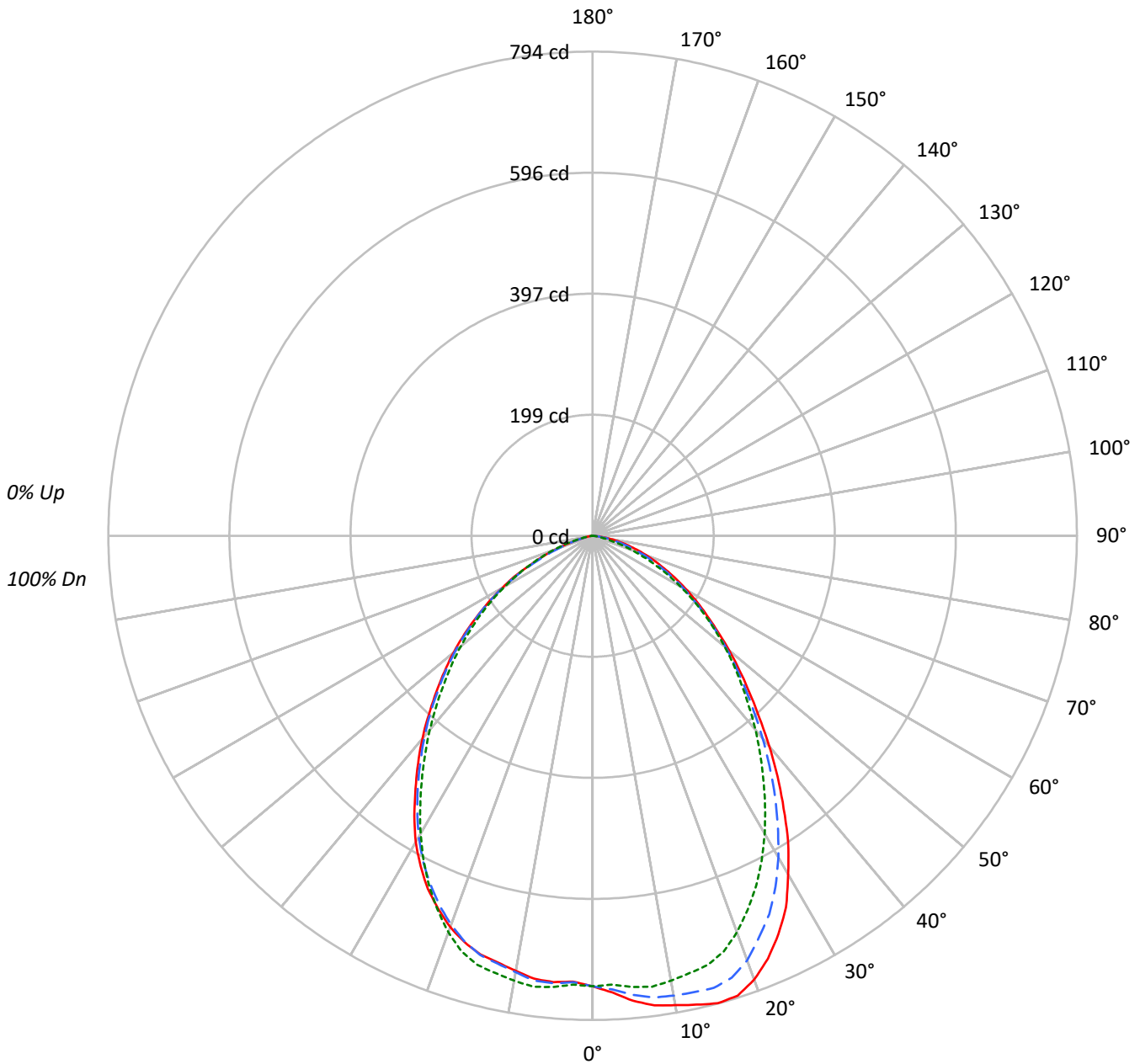
Input Watts (W): 14  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				20				20				20				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	111	107	103	100	108	105	102	99	101	98	96	97	95	93	93	92	90	88			88
2	102	95	90	85	100	94	88	84	90	86	82	87	83	80	84	81	78	76			76
3	95	85	78	73	92	84	77	72	81	75	71	78	74	70	76	72	69	67			67
4	87	77	69	63	85	76	68	63	73	67	62	71	66	61	69	64	60	58			58
5	81	70	62	56	79	68	61	55	66	60	55	65	59	54	63	58	54	52			52
6	75	63	55	49	74	62	55	49	61	54	49	59	53	48	58	52	48	46			46
7	70	58	50	44	69	57	49	44	56	49	44	54	48	44	53	47	43	41			41
8	66	53	45	40	64	53	45	40	51	44	40	50	44	39	49	43	39	37			37
9	62	49	42	36	60	49	41	36	47	41	36	46	40	36	45	40	36	34			34
10	58	46	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°	91115	91115	91115
5°	94807	91959	90968
10°	97907	92784	90768
15°	101340	93053	90754
20°	101675	90807	89625
25°	98085	86272	86952
30°	91282	80343	82608
35°	82230	73497	76207
40°	72506	66854	69913
45°	63390	60251	63216
50°	56109	54209	57069
55°	49375	47869	49805
60°	44084	40877	42110
65°	38759	33214	32630
70°	33828	24487	22324
75°	28070	14726	11867
80°	21239	5683	3552
85°	9765	1415	1415



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	71.2	4.6
10°-20°	207.9	13.5
20°-30°	301.1	19.6
30°-40°	317.7	20.6
40°-50°	275.0	17.9
50°-60°	203.7	13.2
60°-70°	117.4	7.6
70°-80°	41.0	2.7
80°-90°	4.3	0.3
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°	580.3	37.7
0°-40°	898.0	58.3
0°-60°	1376.7	89.4
0°-90°	1539.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1539.4	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	739	739	739	739	739	
5°	766	756	743	737	735	74
15°	794	768	729	712	711	223
25°	721	685	634	630	639	330
35°	546	521	488	499	506	341
45°	363	353	345	358	362	282
55°	230	225	223	231	232	207
65°	133	125	114	108	112	133
75°	59	50	31	25	25	63
85°	7	4	1	1	1	11
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°	738.7	738.7	738.7	738.7	738.7	738.7	738.7	738.7	738.7
2.5°	749.7	747.7	744.7	740.8	736.7	733.7	732.7	731.8	731.8
5°	765.7	761.7	755.7	747.7	742.7	739.7	736.7	734.7	734.7
7.5°	776.7	772.7	763.7	752.7	745.8	739.7	735.8	732.7	732.7
10°	781.7	776.7	765.7	751.7	740.8	732.7	726.8	724.7	724.7
12.5°	787.6	781.7	766.7	748.7	734.7	724.7	718.7	716.8	716.8
15°	793.6	786.6	767.7	746.7	728.7	716.8	711.8	710.7	710.7
17.5°	790.7	781.7	759.6	734.7	714.7	702.8	697.8	697.8	698.8
20°	774.6	765.7	740.8	712.8	691.8	682.8	678.8	680.8	682.8
22.5°	750.6	739.7	712.8	685.8	663.9	655.8	655.8	658.9	661.8
25°	720.7	710.7	684.8	654.9	633.9	628.0	629.9	634.9	638.9
27.5°	686.9	675.8	648.9	620.9	600.0	596.9	601.9	609.0	610.9
30°	640.9	631.9	609.0	582.0	564.1	563.0	570.0	575.0	580.0
32.5°	596.9	587.0	565.0	539.1	526.1	527.1	535.1	541.1	544.1
35°	546.1	537.1	521.1	500.2	488.1	490.2	499.1	505.2	506.1
37.5°	498.1	492.1	476.2	460.1	451.2	455.3	463.2	470.1	470.1
40°	450.3	445.2	433.2	420.2	415.2	420.2	428.3	434.2	434.2
42.5°	404.3	401.2	391.4	382.4	379.3	386.4	393.3	398.3	397.3
45°	363.4	360.4	353.4	346.4	345.4	352.4	358.4	361.3	362.4
47.5°	326.4	324.4	318.5	313.5	313.5	320.4	325.4	328.5	329.4
50°	292.4	290.5	285.5	281.5	282.5	289.5	293.5	296.5	297.4
52.5°	258.6	257.5	253.6	248.5	251.6	256.5	261.5	263.6	264.6
55°	229.6	229.6	224.6	220.6	222.6	227.6	230.6	231.6	231.6
57.5°	203.6	202.6	196.7	192.7	193.6	198.6	200.7	201.7	201.7
60°	178.7	177.7	171.7	165.7	165.7	168.7	169.8	170.7	170.7
62.5°	154.7	153.7	146.8	141.8	139.7	138.7	138.7	140.8	144.7
65°	132.8	131.8	124.7	116.8	113.8	110.9	107.8	109.8	111.8
67.5°	112.8	110.9	103.8	96.9	89.8	84.8	79.8	82.9	86.9
70°	93.8	91.9	83.9	75.8	67.9	59.9	55.9	59.9	61.9
72.5°	75.8	73.9	65.8	57.9	47.9	39.9	38.9	39.9	40.9
75°	58.9	57.9	49.9	40.9	30.9	24.9	24.9	24.9	24.9
77.5°	43.9	42.0	34.0	25.9	18.0	14.0	13.0	13.0	13.0
80°	29.9	28.0	20.9	15.0	8.0	6.0	6.0	5.0	5.0
82.5°	16.9	15.9	11.0	6.0	3.0	2.0	2.0	2.0	2.0
85°	6.9	6.0	4.0	2.0	1.0	1.0	1.0	1.0	1.0
87.5°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
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)