

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: P592655

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

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P592655  
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: HC415D010-HM40525950-41WWWB  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, BLACK BAFFLE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 5000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1395.9 lumens  
Efficiency: N/A  
Efficacy: 99.7 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

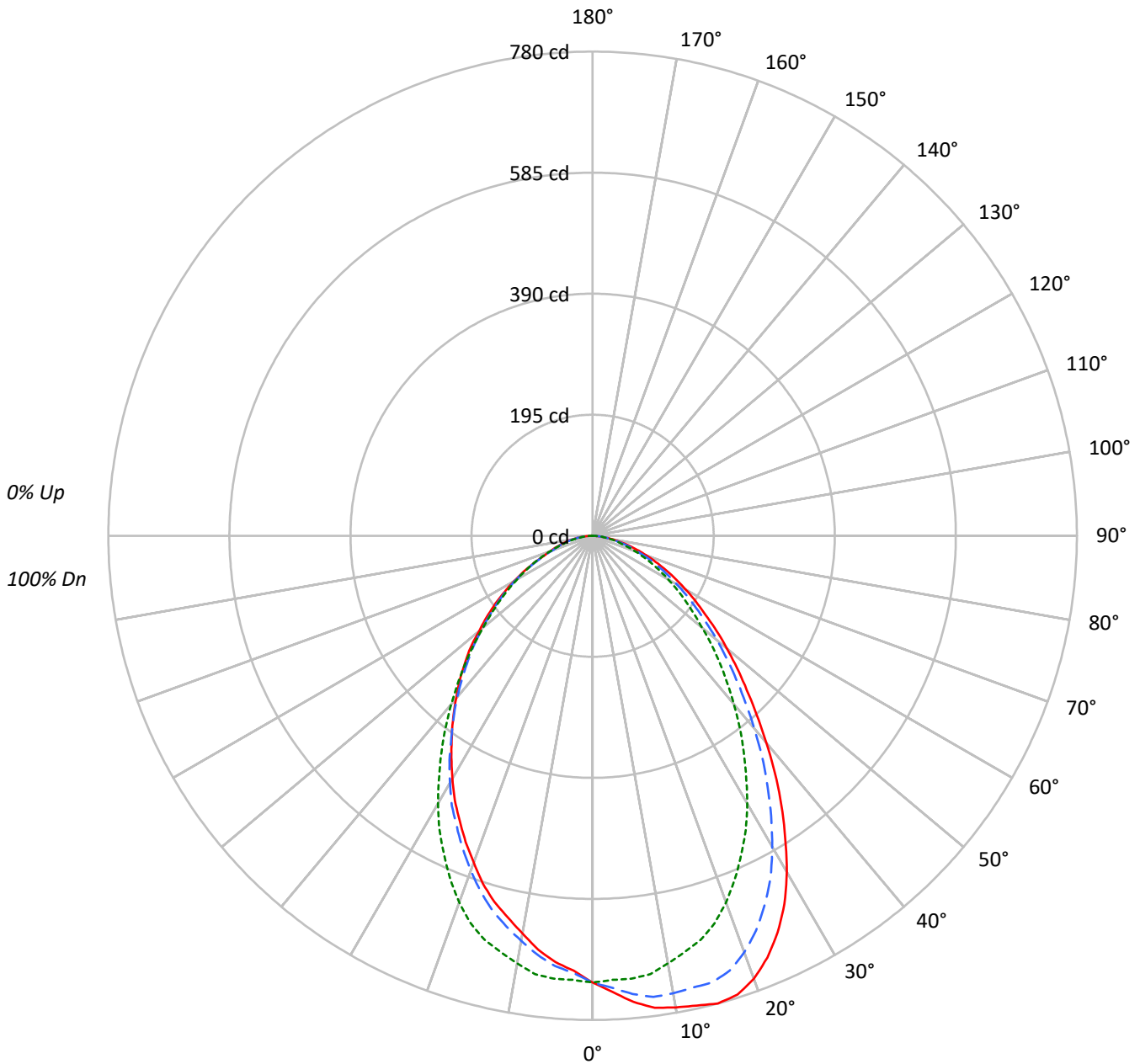
Input Watts (W): 14  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P592655

CATALOG NUMBER: HC415D010-HM40525950-41WWWB

### Luminous Intensity Polar Plot





TEST NUMBER: P592655

CATALOG NUMBER: HC415D010-HM40525950-41WWWB

**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	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°	88772	88772	88772
5°	93345	88665	85335
10°	96629	87611	81474
15°	99591	86017	77984
20°	99693	82472	73507
25°	95935	77072	68906
30°	89102	70929	64349
35°	79851	63860	59538
40°	70058	56968	55051
45°	61245	50465	50779
50°	54094	44135	45747
55°	47676	39138	41117
60°	42628	34635	36017
65°	37767	30470	30470
70°	32998	26002	26002
75°	28165	22018	24639
80°	22304	19676	22304
85°	14294	17124	20945



TEST NUMBER: P592655

CATALOG NUMBER: HC415D010-HM40525950-41WWWB

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	68.2	4.9
10°-20°	192.0	13.8
20°-30°	269.0	19.3
30°-40°	277.2	19.9
40°-50°	236.0	16.9
50°-60°	174.9	12.5
60°-70°	109.7	7.9
70°-80°	54.5	3.9
80°-90°	14.3	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°	529.3	37.9
0°-40°	806.5	57.8
0°-60°	1217.3	87.2
0°-90°	1395.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1395.9	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	720	720	720	720	720	
5°	754	741	716	696	689	72
15°	780	745	674	625	611	219
25°	705	656	566	517	506	322
35°	530	491	424	396	395	331
45°	351	327	289	284	291	272
55°	222	204	182	186	191	200
65°	129	116	104	103	104	129
75°	59	53	46	50	52	63
85°	10	10	12	14	15	13
90°	0	0	0	0	0	



TEST NUMBER: P592655

CATALOG NUMBER: HC415D010-HM40525950-41WWWB

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	719.7	719.7	719.7	719.7	719.7	719.7	719.7	719.7	719.7
2.5°	735.5	732.7	729.0	722.6	716.1	710.5	704.9	702.2	701.3
5°	753.9	748.4	741.0	729.0	716.1	704.9	695.7	691.1	689.2
7.5°	766.9	761.3	749.3	730.9	712.3	695.7	680.9	674.5	672.6
10°	771.5	765.1	748.4	723.5	699.5	679.1	662.5	654.1	650.5
12.5°	775.2	766.9	745.6	716.1	686.5	661.5	644.0	633.0	630.1
15°	779.9	770.5	744.7	708.7	673.6	644.0	624.6	614.4	610.7
17.5°	775.2	765.1	734.5	693.9	654.1	621.8	600.6	591.4	587.6
20°	759.5	748.4	714.3	670.8	628.3	595.0	573.7	564.5	560.0
22.5°	735.5	723.5	688.3	642.2	598.7	566.3	546.1	536.8	534.0
25°	704.9	693.0	656.0	608.9	566.3	535.0	517.4	509.1	506.3
27.5°	668.9	657.0	620.9	574.8	534.0	504.5	490.6	482.3	480.5
30°	625.6	613.5	578.4	535.9	498.0	470.3	459.2	452.8	451.8
32.5°	577.5	567.4	535.0	496.2	460.1	437.1	428.8	424.1	423.2
35°	530.3	519.3	490.6	455.5	424.1	403.7	396.4	395.4	395.4
37.5°	482.3	471.2	448.1	415.8	389.0	370.5	367.7	368.6	368.6
40°	435.1	425.0	404.7	377.9	353.8	340.0	339.1	341.0	341.9
42.5°	390.8	382.5	364.1	341.0	320.6	309.5	310.4	314.2	316.9
45°	351.1	343.7	327.1	306.8	289.3	280.8	283.7	288.2	291.1
47.5°	315.1	308.6	292.9	274.5	259.6	254.1	257.8	263.3	267.1
50°	281.9	276.3	261.5	242.1	230.0	226.4	231.0	236.5	238.4
52.5°	252.2	246.7	231.0	214.3	205.1	203.3	207.8	212.5	215.2
55°	221.7	217.2	204.2	189.4	182.0	181.1	185.7	189.4	191.2
57.5°	196.8	192.2	180.2	167.3	160.8	159.9	164.4	167.3	168.2
60°	172.8	168.2	157.0	145.1	140.4	140.4	143.3	145.1	146.0
62.5°	150.7	146.0	135.9	125.6	122.0	122.0	122.0	122.9	125.6
65°	129.4	125.6	116.4	107.2	104.4	102.6	102.6	102.6	104.4
67.5°	109.9	106.3	98.9	90.5	87.8	85.0	84.0	86.0	86.0
70°	91.5	88.7	81.3	74.8	72.1	69.2	68.3	72.1	72.1
72.5°	74.8	72.1	67.4	60.9	58.2	57.3	59.1	60.9	61.9
75°	59.1	56.4	52.6	49.0	46.2	47.1	49.9	50.8	51.7
77.5°	44.3	43.4	39.7	37.0	37.0	37.9	39.7	41.6	42.5
80°	31.4	30.5	28.7	26.8	27.7	29.6	30.5	32.3	31.4
82.5°	19.4	19.4	18.5	18.5	19.4	21.3	22.2	23.1	24.0
85°	10.1	10.1	10.1	11.1	12.1	13.0	13.9	14.8	14.8
87.5°	2.7	3.8	3.8	4.7	5.6	5.6	6.5	6.5	6.5
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)