

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State  
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P308112

Luminaire Tested: **22FCZ2-24HE-UNV-L82765-HRP-CA08-W2A-U-5700K**

Issue Date: 3/3/2020

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.

**Test Information**

Test Method: LM-79-08  
Report Number: P308112  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-22)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: 22FCZ2-24HE-UNV-L82765-HRP-CA08-W2A-U-5700K  
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.08" ACRYLIC SHEET  
Light Source: (168) 3000K TUNABLE CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER  
Luminaire Equipment:

<u>Sample No.</u>	<u>Condition</u>	<u>Description</u>
AS-5443-1	Good	WHITE TWIN R-EVOLVE FLOOD
AS-5443-2	Good	REFLECTOR
AS-5443-3	Good	DRIVER
AS-5443-4	Good	UPPER MODULE
AS-5443-5	Good	LENS
AS-5443-6	Good	DRIVER 2
AS-5443-7	Good	TRIM RING

**Summary**

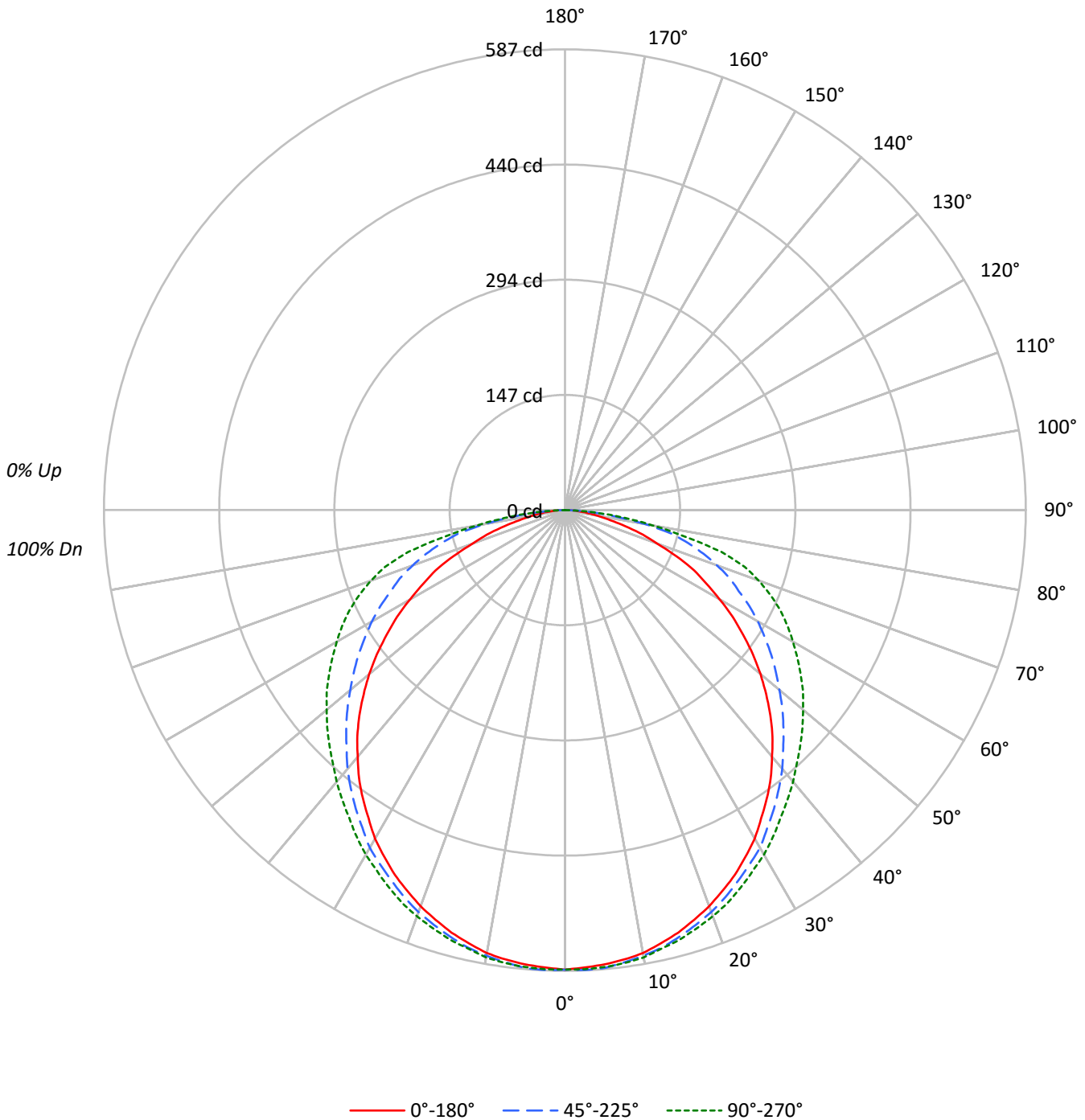
Lumens per Lamp: N/A  
Luminaire Lumens: 1778.0 lumens  
Efficiency: N/A  
Efficacy: 91.7 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 19.4  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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: P308112

CATALOG NUMBER: 22FCZ2-24HE-UNV-L82765-HRP-CA08-W2A-U-5700K

### Luminous Intensity Polar Plot





TEST NUMBER: P308112

CATALOG NUMBER: 22FCZ2-24HE-UNV-L82765-HRP-CA08-W2A-U-5700K

**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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	108	103	98	94	105	101	96	93	96	93	90	92	90	87	89	87	84	82
2	98	89	82	76	95	87	80	75	84	78	73	80	75	71	77	73	70	68
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56
4	81	69	59	52	79	67	59	52	65	57	51	62	56	51	60	55	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	39	50	43	38	49	43	38	36
7	64	50	41	34	62	49	40	34	47	40	34	46	39	34	44	38	33	31
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	1576	1576	1576
5°	1569	1582	1579
10°	1566	1575	1581
15°	1553	1568	1578
20°	1538	1561	1577
25°	1522	1548	1575
30°	1502	1544	1575
35°	1474	1525	1573
40°	1442	1513	1588
45°	1408	1498	1614
50°	1362	1493	1657
55°	1300	1505	1721
60°	1225	1527	1805
65°	1157	1557	1928
70°	988	1624	2065
75°	828	1691	2146
80°	677	1633	1790
85°	590	1213	1315



TEST NUMBER: P308112

CATALOG NUMBER: 22FCZ2-24HE-UNV-L82765-HRP-CA08-W2A-U-5700K

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	55.5	3.1
10°-20°	158.7	8.9
20°-30°	240.6	13.5
30°-40°	290.5	16.3
40°-50°	305.2	17.2
50°-60°	287.2	16.2
60°-70°	239.5	13.5
70°-80°	158.6	8.9
80°-90°	42.3	2.4
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°	454.8	25.6
0°-40°	745.2	41.9
0°-60°	1337.6	75.2
0°-90°	1778.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1778.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	586	586	586	586	586	
5°	581	582	586	586	584	55
15°	557	560	563	565	566	157
25°	513	516	522	528	530	236
35°	449	453	464	474	479	281
45°	370	376	394	414	424	285
55°	277	289	321	353	367	248
65°	182	197	244	285	303	177
75°	80	111	163	196	206	86
85°	19	29	39	43	43	22
90°	0	0	0	0	0	



TEST NUMBER: P308112

CATALOG NUMBER: 22FC22-24HE-UNV-L82765-HRP-CA08-W2A-U-5700K

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	585.5	585.5	585.5	585.5	585.5
2.5°	583.2	584.4	586.6	586.6	585.5
5°	581.0	582.1	585.5	585.5	584.4
7.5°	577.6	578.7	581.0	583.2	582.1
10°	573.1	574.3	576.5	578.7	578.7
12.5°	565.3	566.4	570.9	572.0	572.0
15°	557.4	559.7	563.0	565.3	566.4
17.5°	547.3	549.6	554.1	558.6	558.6
20°	537.2	539.5	545.1	549.6	550.7
22.5°	524.9	528.3	533.9	539.5	541.7
25°	512.6	515.9	521.5	528.3	530.5
27.5°	498.0	501.4	509.2	517.1	518.2
30°	483.4	486.8	496.9	503.6	507.0
32.5°	465.5	470.0	480.0	490.1	493.5
35°	448.6	453.1	464.3	474.4	478.9
37.5°	430.7	435.2	447.5	459.9	465.5
40°	410.5	416.1	430.7	444.2	452.0
42.5°	391.4	397.0	411.6	429.6	437.4
45°	370.1	375.7	393.7	413.9	424.0
47.5°	347.7	354.4	375.7	400.4	410.5
50°	325.3	333.1	356.7	384.7	395.9
52.5°	301.7	311.8	338.7	369.0	382.5
55°	277.0	289.4	320.8	353.3	366.8
57.5°	253.5	264.7	301.7	336.5	351.1
60°	227.7	242.3	283.8	319.7	335.4
62.5°	203.0	218.7	264.7	302.8	319.7
65°	181.7	197.4	244.5	284.9	302.8
67.5°	153.7	175.0	227.7	265.8	283.8
70°	125.6	154.8	206.4	245.6	262.5
72.5°	104.3	132.3	185.1	224.3	240.0
75°	79.6	111.0	162.6	196.3	206.4
77.5°	59.4	92.0	139.1	155.9	157.0
80°	43.7	70.7	105.4	111.0	115.5
82.5°	30.3	49.4	68.4	75.1	77.4
85°	19.1	29.2	39.3	42.6	42.6
87.5°	10.1	11.2	13.5	13.5	13.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)