

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: P312487

Luminaire Tested: **22FCZ2-24HE-UNV-L83050-HRP-CP250-W2A-U-4000K**

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: P312487  
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-L83050-HRP-CP250-W2A-U-4000K  
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"  
POLYCARB SHEET  
Light Source: (168) 4000K 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**

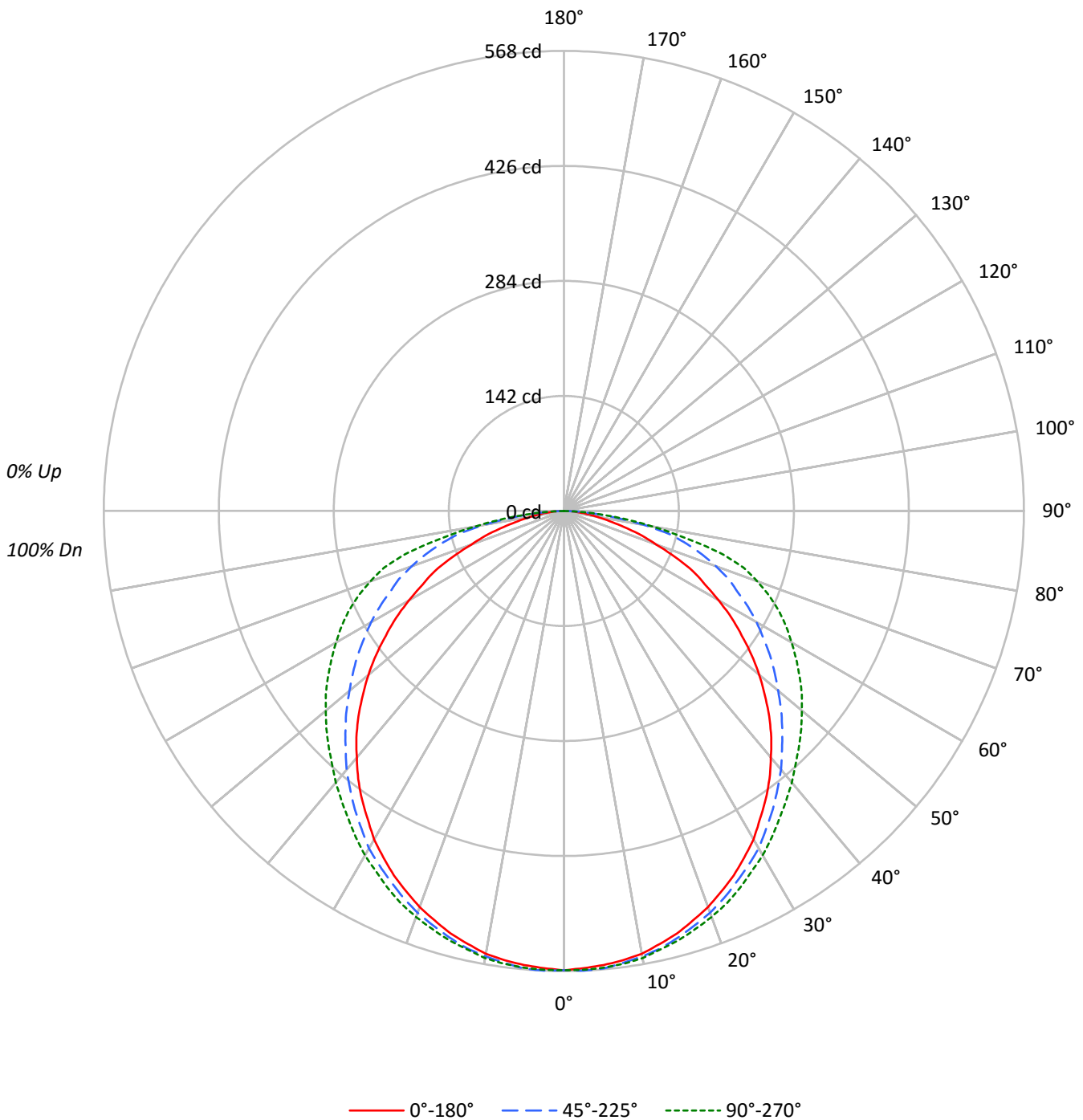
Lumens per Lamp: N/A  
Luminaire Lumens: 1722.0 lumens  
Efficiency: N/A  
Efficacy: 89.2 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 19.3  
Input Voltage (V): NR  
Input Current (A<sub>in</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: P312487

CATALOG NUMBER: 22FCZ2-24HE-UNV-L83050-HRP-CP250-W2A-U-4000K

### Luminous Intensity Polar Plot





TEST NUMBER: P312487

CATALOG NUMBER: 22FC22-24HE-UNV-L83050-HRP-CP250-W2A-U-4000K

**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°	1526	1526	1526
5°	1520	1532	1529
10°	1517	1526	1532
15°	1504	1519	1528
20°	1490	1512	1527
25°	1474	1500	1526
30°	1455	1495	1526
35°	1427	1477	1524
40°	1397	1465	1538
45°	1364	1451	1563
50°	1319	1446	1605
55°	1259	1458	1666
60°	1187	1479	1748
65°	1121	1508	1868
70°	958	1573	2000
75°	802	1638	2078
80°	657	1582	1734
85°	571	1173	1275



TEST NUMBER: P312487

CATALOG NUMBER: 22FCZ2-24HE-UNV-L83050-HRP-CP250-W2A-U-4000K

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	53.7	3.1
10°-20°	153.7	8.9
20°-30°	233.0	13.5
30°-40°	281.3	16.3
40°-50°	295.6	17.2
50°-60°	278.1	16.2
60°-70°	231.9	13.5
70°-80°	153.7	8.9
80°-90°	41.0	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°	440.4	25.6
0°-40°	721.8	41.9
0°-60°	1295.5	75.2
0°-90°	1722.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1722.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	567	567	567	567	567	
5°	563	564	567	567	566	53
15°	540	542	545	548	549	152
25°	496	500	505	512	514	229
35°	434	439	450	460	464	272
45°	358	364	381	401	411	276
55°	268	280	311	342	355	240
65°	176	191	237	276	293	171
75°	77	108	158	190	200	84
85°	18	28	38	41	41	21
90°	0	0	0	0	0	



TEST NUMBER: P312487

CATALOG NUMBER: 22FCZ2-24HE-UNV-L83050-HRP-CP250-W2A-U-4000K

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	567.0	567.0	567.0	567.0	567.0
2.5°	564.9	565.9	568.1	568.1	567.0
5°	562.7	563.8	567.0	567.0	565.9
7.5°	559.4	560.5	562.7	564.9	563.8
10°	555.1	556.2	558.3	560.5	560.5
12.5°	547.5	548.6	552.9	554.0	554.0
15°	539.9	542.1	545.3	547.5	548.6
17.5°	530.1	532.3	536.6	541.0	541.0
20°	520.3	522.5	527.9	532.3	533.4
22.5°	508.4	511.6	517.1	522.5	524.7
25°	496.4	499.7	505.1	511.6	513.8
27.5°	482.3	485.6	493.2	500.8	501.9
30°	468.2	471.4	481.2	487.7	491.0
32.5°	450.8	455.1	464.9	474.7	478.0
35°	434.5	438.9	449.7	459.5	463.8
37.5°	417.1	421.5	433.4	445.4	450.8
40°	397.6	403.0	417.1	430.2	437.8
42.5°	379.1	384.5	398.7	416.0	423.6
45°	358.5	363.9	381.3	400.8	410.6
47.5°	336.7	343.3	363.9	387.8	397.6
50°	315.0	322.6	345.4	372.6	383.5
52.5°	292.2	302.0	328.1	357.4	370.4
55°	268.3	280.3	310.7	342.2	355.2
57.5°	245.5	256.4	292.2	325.9	340.0
60°	220.5	234.6	274.8	309.6	324.8
62.5°	196.6	211.8	256.4	293.3	309.6
65°	176.0	191.2	236.8	275.9	293.3
67.5°	148.8	169.5	220.5	257.4	274.8
70°	121.7	149.9	199.9	237.9	254.2
72.5°	101.0	128.2	179.2	217.3	232.5
75°	77.1	107.5	157.5	190.1	199.9
77.5°	57.6	89.1	134.7	151.0	152.1
80°	42.4	68.4	102.1	107.5	111.9
82.5°	29.3	47.8	66.3	72.8	75.0
85°	18.5	28.2	38.0	41.3	41.3
87.5°	9.8	10.9	13.0	13.0	13.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)