

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: P308139

Luminaire Tested: **22FCZ2-24HE-UNV-L82765-HRP-CP187-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: P308139  
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-CP187-W2A-U-5700K  
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.187" POLYCARB 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**

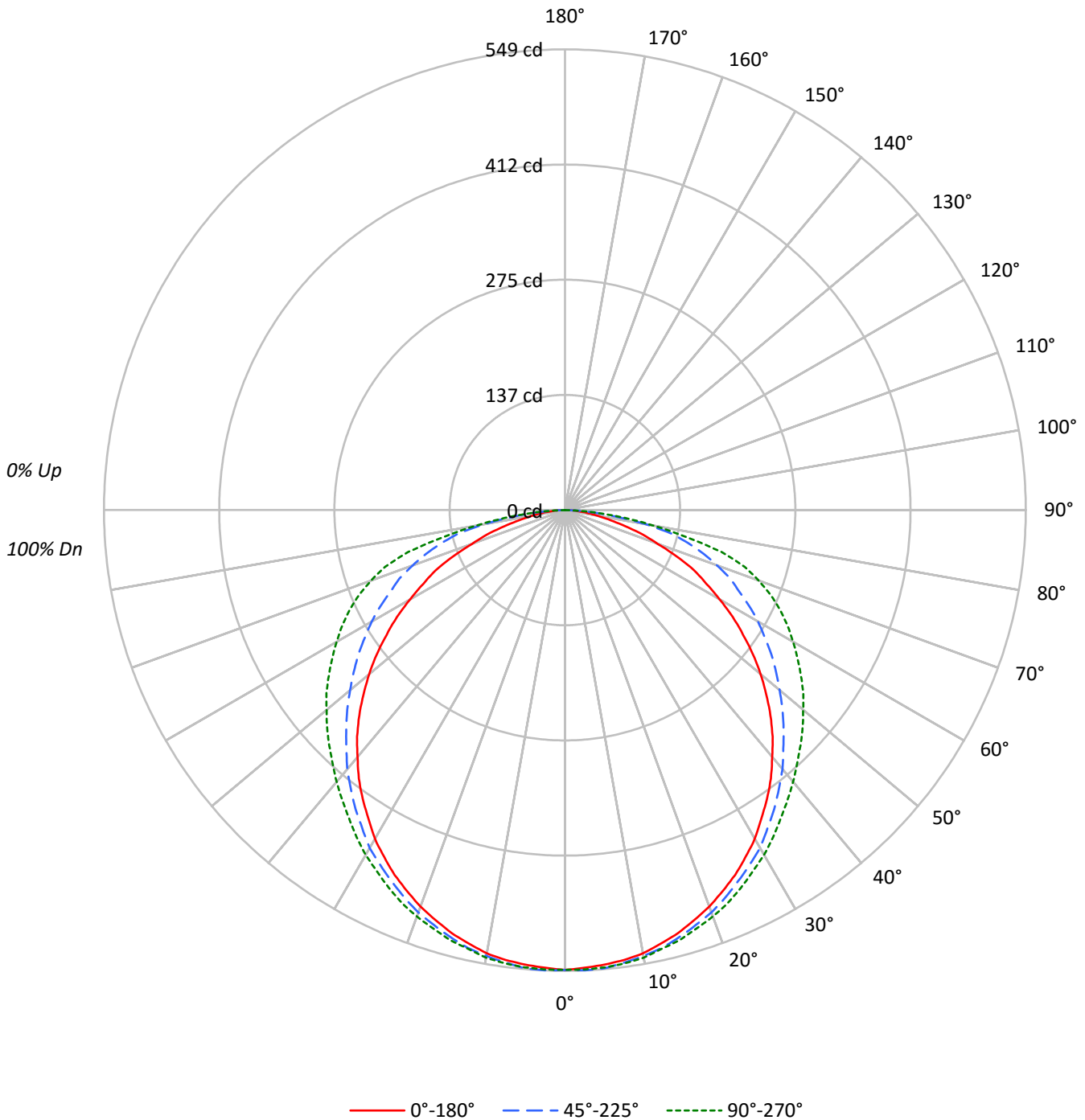
Lumens per Lamp: N/A  
Luminaire Lumens: 1664.0 lumens  
Efficiency: N/A  
Efficacy: 85.8 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 19.4  
Input Voltage (V): NR  
Input Current (Ain): NR  
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: P308139

CATALOG NUMBER: 22FCZ2-24HE-UNV-L82765-HRP-CP187-W2A-U-5700K

### Luminous Intensity Polar Plot





TEST NUMBER: P308139

CATALOG NUMBER: 22FCZ2-24HE-UNV-L82765-HRP-CP187-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°	1474	1474	1474
5°	1469	1480	1477
10°	1466	1474	1480
15°	1453	1468	1477
20°	1440	1461	1476
25°	1424	1449	1474
30°	1406	1445	1474
35°	1379	1428	1472
40°	1350	1416	1486
45°	1318	1402	1510
50°	1274	1397	1551
55°	1217	1408	1610
60°	1147	1429	1689
65°	1082	1457	1805
70°	925	1519	1932
75°	775	1582	2008
80°	634	1530	1675
85°	550	1133	1232



TEST NUMBER: P308139

CATALOG NUMBER: 22FCZ2-24HE-UNV-L82765-HRP-CP187-W2A-U-5700K

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	51.9	3.1
10°-20°	148.5	8.9
20°-30°	225.1	13.5
30°-40°	271.8	16.3
40°-50°	285.6	17.2
50°-60°	268.8	16.2
60°-70°	224.1	13.5
70°-80°	148.5	8.9
80°-90°	39.6	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°	425.6	25.6
0°-40°	697.4	41.9
0°-60°	1251.8	75.2
0°-90°	1664.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1664.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	548	548	548	548	548	
5°	544	545	548	548	547	52
15°	522	524	527	529	530	147
25°	480	483	488	494	496	221
35°	420	424	435	444	448	263
45°	346	352	368	387	397	267
55°	259	271	300	331	343	232
65°	170	185	229	267	283	165
75°	74	104	152	184	193	81
85°	18	27	37	40	40	21
90°	0	0	0	0	0	



TEST NUMBER: P308139

CATALOG NUMBER: 22FCZ2-24HE-UNV-L82765-HRP-CP187-W2A-U-5700K

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	547.9	547.9	547.9	547.9	547.9
2.5°	545.8	546.9	549.0	549.0	547.9
5°	543.7	544.8	547.9	547.9	546.9
7.5°	540.6	541.6	543.7	545.8	544.8
10°	536.4	537.4	539.5	541.6	541.6
12.5°	529.0	530.1	534.3	535.3	535.3
15°	521.7	523.8	526.9	529.0	530.1
17.5°	512.2	514.3	518.5	522.7	522.7
20°	502.8	504.9	510.1	514.3	515.4
22.5°	491.3	494.4	499.7	504.9	507.0
25°	479.7	482.9	488.1	494.4	496.5
27.5°	466.1	469.2	476.6	483.9	485.0
30°	452.4	455.6	465.0	471.3	474.5
32.5°	435.6	439.8	449.3	458.7	461.9
35°	419.9	424.1	434.6	444.0	448.2
37.5°	403.1	407.3	418.8	430.4	435.6
40°	384.2	389.4	403.1	415.7	423.0
42.5°	366.3	371.6	385.2	402.0	409.4
45°	346.4	351.6	368.4	387.3	396.8
47.5°	325.4	331.7	351.6	374.7	384.2
50°	304.4	311.8	333.8	360.0	370.5
52.5°	282.4	291.8	317.0	345.3	357.9
55°	259.3	270.8	300.2	330.7	343.2
57.5°	237.2	247.7	282.4	314.9	328.6
60°	213.1	226.7	265.6	299.2	313.9
62.5°	190.0	204.7	247.7	283.4	299.2
65°	170.0	184.7	228.8	266.6	283.4
67.5°	143.8	163.8	213.1	248.8	265.6
70°	117.6	144.9	193.1	229.9	245.6
72.5°	97.6	123.9	173.2	209.9	224.6
75°	74.5	103.9	152.2	183.7	193.1
77.5°	55.6	86.1	130.2	145.9	147.0
80°	40.9	66.1	98.7	103.9	108.1
82.5°	28.3	46.2	64.0	70.3	72.4
85°	17.8	27.3	36.7	39.9	39.9
87.5°	9.4	10.5	12.6	12.6	12.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)