

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: P312465

Luminaire Tested: **22FCZ2-24HE-UNV-L83050-HRP-CA08-W2A-U-3000K**

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: P312465  
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-CA08-W2A-U-3000K  
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**

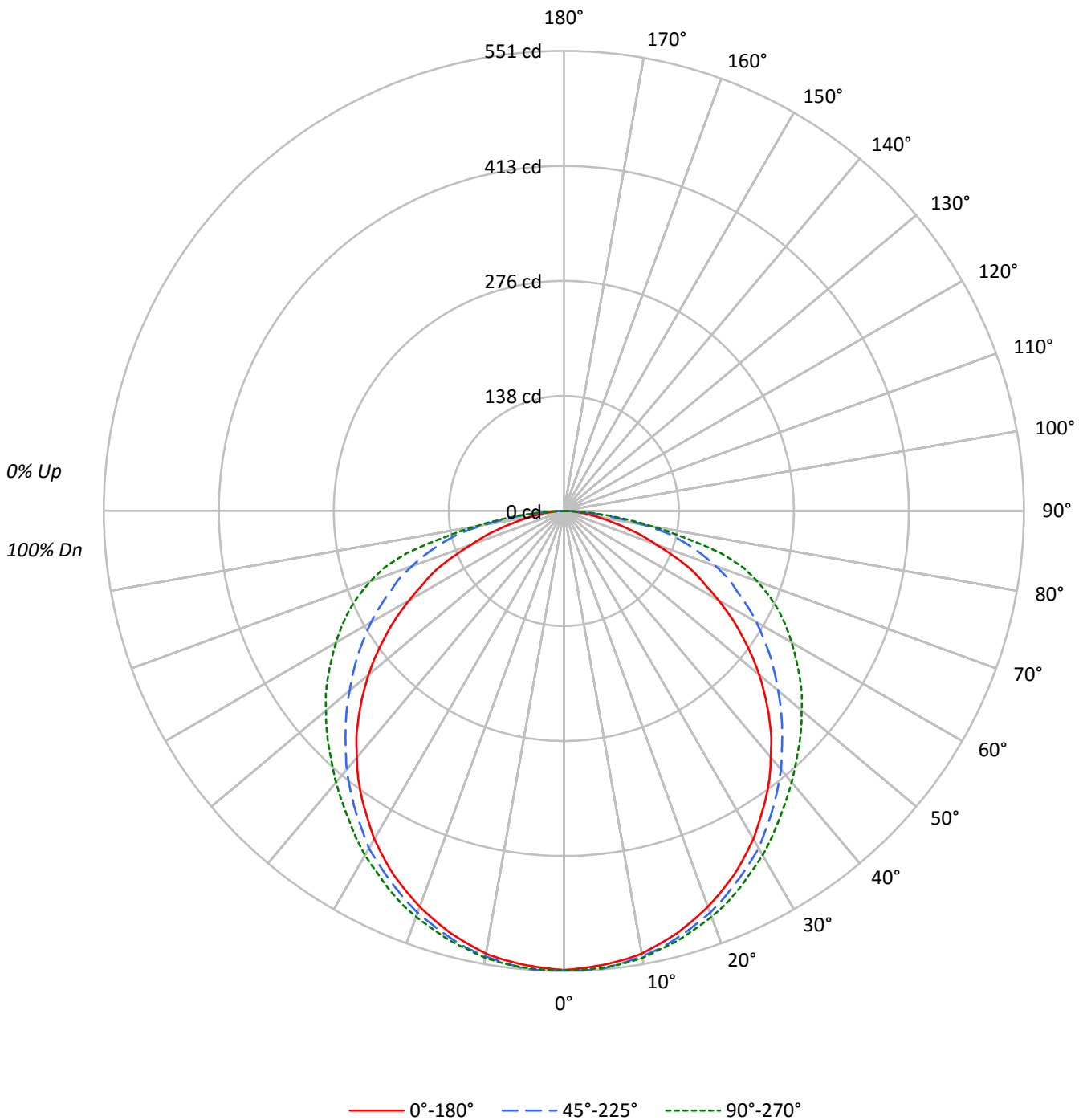
Lumens per Lamp: N/A  
Luminaire Lumens: 1670.0 lumens  
Efficiency: N/A  
Efficacy: 88.4 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 18.9  
Input Voltage (V): NR  
Input Current (A<sub>in</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



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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	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°	1480	1480	1480
5°	1474	1485	1483
10°	1471	1480	1485
15°	1459	1473	1482
20°	1445	1466	1481
25°	1429	1455	1480
30°	1411	1450	1480
35°	1384	1433	1478
40°	1355	1421	1491
45°	1323	1407	1515
50°	1279	1402	1557
55°	1221	1414	1616
60°	1151	1434	1695
65°	1087	1463	1811
70°	928	1525	1939
75°	778	1589	2015
80°	637	1534	1681
85°	553	1139	1235



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	52.1	3.1
10°-20°	149.1	8.9
20°-30°	225.9	13.5
30°-40°	272.8	16.3
40°-50°	286.7	17.2
50°-60°	269.7	16.2
60°-70°	224.9	13.5
70°-80°	149.0	8.9
80°-90°	39.7	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°	427.1	25.6
0°-40°	700.0	41.9
0°-60°	1256.4	75.2
0°-90°	1670.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1670.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	550	550	550	550	550	
5°	546	547	550	550	549	52
15°	524	526	529	531	532	148
25°	481	485	490	496	498	222
35°	421	426	436	446	450	263
45°	348	353	370	389	398	268
55°	260	272	301	332	344	233
65°	171	185	230	268	284	166
75°	75	104	153	184	194	81
85°	18	27	37	40	40	21
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	549.9	549.9	549.9	549.9	549.9
2.5°	547.8	548.9	551.0	551.0	549.9
5°	545.7	546.8	549.9	549.9	548.9
7.5°	542.5	543.6	545.7	547.8	546.8
10°	538.3	539.4	541.5	543.6	543.6
12.5°	530.9	532.0	536.2	537.3	537.3
15°	523.6	525.7	528.8	530.9	532.0
17.5°	514.1	516.2	520.4	524.6	524.6
20°	504.6	506.7	512.0	516.2	517.3
22.5°	493.0	496.2	501.5	506.7	508.8
25°	481.4	484.6	489.9	496.2	498.3
27.5°	467.7	470.9	478.3	485.7	486.7
30°	454.0	457.2	466.7	473.0	476.2
32.5°	437.2	441.4	450.9	460.4	463.5
35°	421.4	425.6	436.1	445.6	449.8
37.5°	404.5	408.7	420.3	431.9	437.2
40°	385.6	390.8	404.5	417.2	424.5
42.5°	367.7	372.9	386.6	403.5	410.9
45°	347.6	352.9	369.8	388.7	398.2
47.5°	326.6	332.9	352.9	376.1	385.6
50°	305.5	312.9	335.0	361.3	371.9
52.5°	283.4	292.9	318.1	346.6	359.2
55°	260.2	271.8	301.3	331.8	344.5
57.5°	238.1	248.6	283.4	316.0	329.7
60°	213.9	227.5	266.5	300.2	315.0
62.5°	190.7	205.4	248.6	284.4	300.2
65°	170.7	185.4	229.7	267.6	284.4
67.5°	144.3	164.3	213.9	249.7	266.5
70°	118.0	145.4	193.8	230.7	246.5
72.5°	98.0	124.3	173.8	210.7	225.4
75°	74.8	104.3	152.8	184.4	193.8
77.5°	55.8	86.4	130.6	146.4	147.5
80°	41.1	66.4	99.0	104.3	108.5
82.5°	28.4	46.4	64.3	70.6	72.7
85°	17.9	27.4	36.9	40.0	40.0
87.5°	9.5	10.5	12.6	12.6	12.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)