

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: P312930

Luminaire Tested: **22FCZ2-24HE-UNV-L83050-S-CP187-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: P312930  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-23)  
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-S-CP187-W2A-U-3000K  
Description: 2'X2' TROFFER LED MODULE, SMOOTH 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**

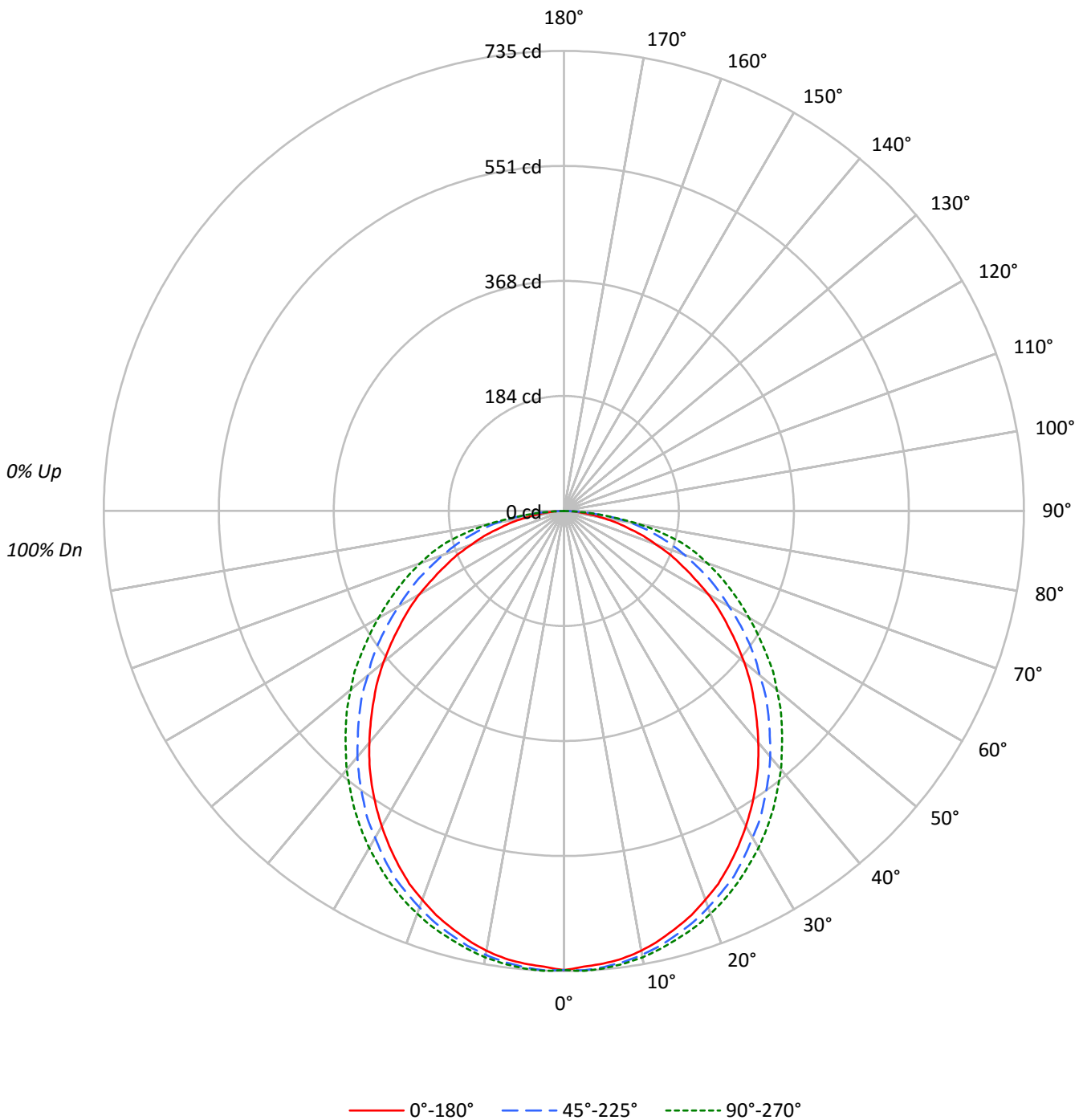
Lumens per Lamp: N/A  
Luminaire Lumens: 2047.0 lumens  
Efficiency: N/A  
Efficacy: 108.3 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 1.26 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 18.9  
Input Voltage (V): NR  
Input Current (A<sub>in</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	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83
2	98	90	83	77	96	88	82	76	84	79	74	81	77	73	78	74	71	69
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	61	56	52	49
5	75	62	53	47	73	61	53	46	59	52	46	57	51	45	55	50	45	43
6	70	56	47	41	68	55	47	41	53	46	40	52	45	40	50	44	39	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27
10	53	40	32	26	51	39	31	26	38	31	26	37	31	26	36	30	26	24

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

	0°	45°	90°
0°	1974	1974	1974
5°	1961	1976	1981
10°	1949	1968	1978
15°	1924	1950	1969
20°	1893	1931	1961
25°	1855	1911	1948
30°	1807	1873	1932
35°	1757	1839	1914
40°	1698	1802	1896
45°	1636	1759	1875
50°	1575	1711	1859
55°	1501	1681	1846
60°	1434	1640	1840
65°	1338	1630	1861
70°	1232	1615	1916
75°	1112	1639	2016
80°	962	1688	1895
85°	797	1414	1414



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	69.4	3.4
10°-20°	197.4	9.6
20°-30°	295.4	14.4
30°-40°	349.8	17.1
40°-50°	356.5	17.4
50°-60°	319.5	15.6
60°-70°	250.1	12.2
70°-80°	161.3	7.9
80°-90°	47.6	2.3
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°	562.1	27.5
0°-40°	911.9	44.5
0°-60°	1587.9	77.6
0°-90°	2047.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2047.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	734	734	734	734	734	
5°	726	728	732	732	734	69
15°	690	694	700	706	707	195
25°	625	630	644	652	656	288
35°	535	542	560	577	583	334
45°	430	439	462	486	493	332
55°	320	330	358	383	394	287
65°	210	222	256	281	292	209
75°	107	123	158	184	194	115
85°	26	35	46	46	46	30
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	733.5	733.5	733.5	733.5	733.5
2.5°	728.7	730.6	734.5	735.4	735.4
5°	725.9	727.8	731.6	732.5	733.5
7.5°	721.1	722.0	726.8	728.7	729.7
10°	713.4	715.4	720.1	723.0	724.0
12.5°	702.9	705.8	711.5	715.4	716.3
15°	690.5	694.3	700.1	705.8	706.8
17.5°	677.2	681.0	688.6	695.3	697.2
20°	660.9	665.7	674.3	681.9	684.8
22.5°	644.7	648.5	659.0	668.6	671.4
25°	624.6	630.4	643.7	652.3	656.1
27.5°	603.6	610.3	623.7	635.1	639.0
30°	581.6	588.3	602.7	617.0	621.8
32.5°	558.7	566.4	583.6	597.9	602.7
35°	534.8	541.5	559.7	576.9	582.6
37.5°	510.0	515.7	536.8	554.9	560.6
40°	483.3	490.9	512.9	533.9	539.6
42.5°	456.5	465.1	487.1	510.0	515.7
45°	429.8	439.3	462.3	486.1	492.8
47.5°	404.0	411.6	437.4	460.4	469.9
50°	376.3	383.9	408.8	434.6	444.1
52.5°	347.7	358.2	384.9	409.7	421.2
55°	320.0	330.5	358.2	383.0	393.5
57.5°	294.2	302.8	331.4	357.2	367.7
60°	266.5	274.1	304.7	332.4	341.9
62.5°	236.9	248.3	279.8	305.6	317.1
65°	210.1	222.5	256.0	280.8	292.3
67.5°	185.3	196.7	229.2	256.0	268.4
70°	156.6	171.9	205.3	232.1	243.5
72.5°	133.7	147.1	181.5	208.2	220.6
75°	107.0	123.2	157.6	184.3	193.9
77.5°	85.0	101.2	133.7	154.7	159.5
80°	62.1	78.3	108.9	119.4	122.3
82.5°	42.0	57.3	78.3	81.2	82.1
85°	25.8	35.3	45.8	45.8	45.8
87.5°	12.4	14.3	16.2	15.3	15.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)