

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: P313457

Luminaire Tested: **24FCZ2-30-UNV-L83050-RDP-CP187-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: P313457  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: 24FCZ2-30-UNV-L83050-RDP-CP187-W2A-U-4000K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.187" 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: 1832.0 lumens  
Efficiency: N/A  
Efficacy: 76.7 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

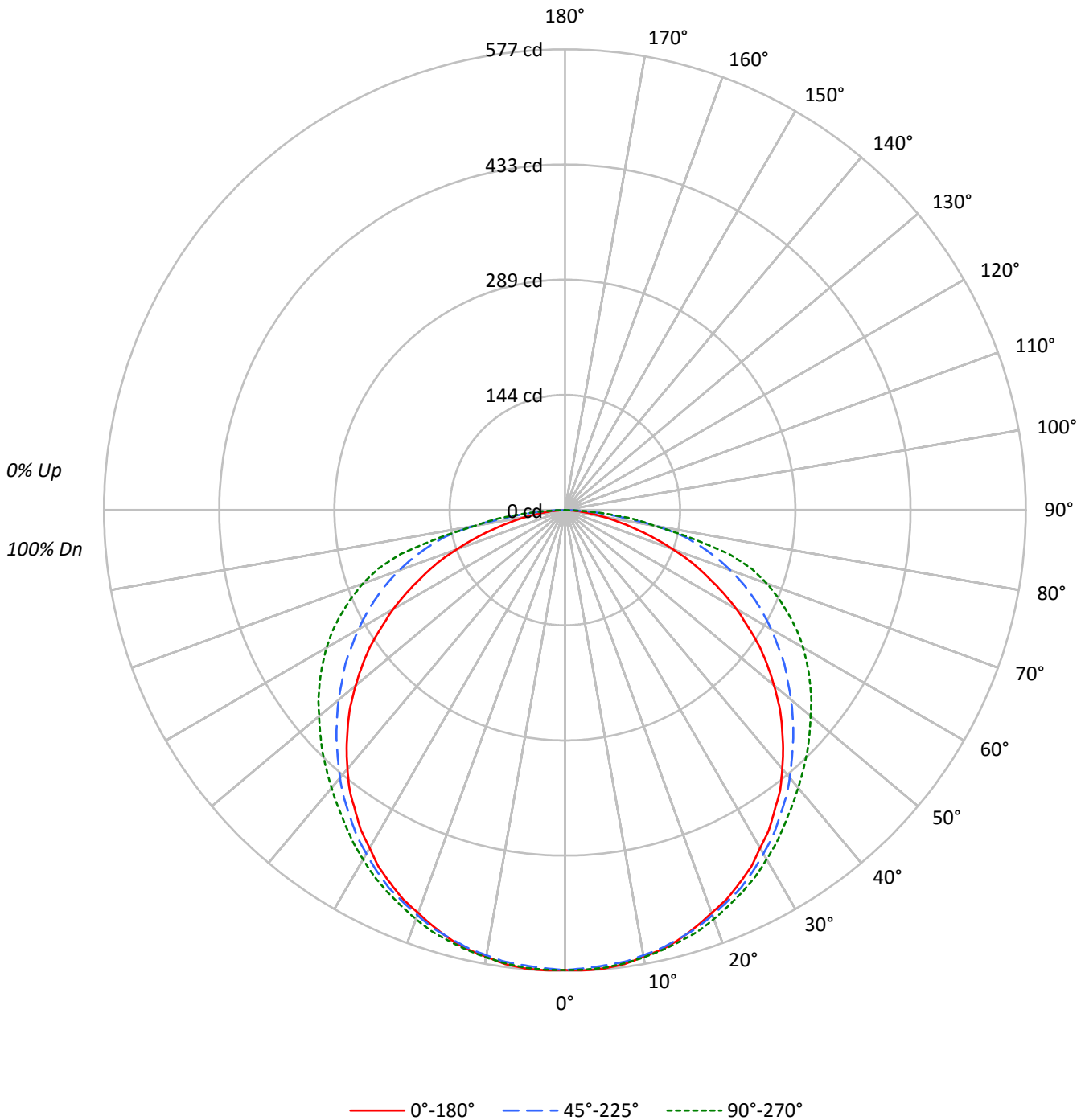
Input Watts (W): 23.9  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	100	96	92	96	93	89	92	89	87	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

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

	0°	45°	90°
0°	775	775	775
5°	778	773	777
10°	776	773	777
15°	775	773	778
20°	769	773	781
25°	766	774	782
30°	760	772	785
35°	752	770	788
40°	744	769	798
45°	731	769	816
50°	715	774	841
55°	697	787	878
60°	668	802	927
65°	625	830	984
70°	568	869	1058
75°	482	917	1105
80°	380	922	894
85°	281	701	786



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	54.6	3.0
10°-20°	157.3	8.6
20°-30°	240.5	13.1
30°-40°	294.0	16.0
40°-50°	313.4	17.1
50°-60°	299.6	16.4
60°-70°	253.8	13.9
70°-80°	170.6	9.3
80°-90°	48.1	2.6
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°	452.4	24.7
0°-40°	746.5	40.7
0°-60°	1359.5	74.2
0°-90°	1832.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1832.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	576	576	576	576	576	
5°	576	575	572	575	575	55
15°	556	556	555	560	559	157
25°	516	518	522	526	527	238
35°	458	462	469	478	480	287
45°	384	391	404	422	429	296
55°	297	308	335	362	374	265
65°	196	216	261	295	309	195
75°	93	126	176	206	213	99
85°	18	37	45	49	51	23
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	576.1	576.1	576.1	576.1	576.1
2.5°	577.0	577.0	574.3	576.1	576.1
5°	576.1	575.2	572.5	575.2	575.2
7.5°	573.4	572.5	570.7	573.4	572.5
10°	567.9	567.9	566.1	568.8	568.8
12.5°	563.4	562.5	561.6	565.2	564.3
15°	556.1	556.1	555.2	559.8	558.8
17.5°	547.0	547.9	548.9	552.5	553.4
20°	537.0	538.9	539.8	545.2	545.2
22.5°	528.0	528.9	530.7	536.1	536.1
25°	516.1	518.0	521.6	526.1	527.0
27.5°	504.3	505.2	509.8	516.1	517.0
30°	488.9	491.6	497.1	504.3	505.2
32.5°	475.2	478.0	484.3	491.6	493.4
35°	458.0	461.6	468.9	478.0	479.8
37.5°	442.5	445.3	454.3	464.3	467.1
40°	423.5	428.9	438.0	449.8	454.3
42.5°	404.4	409.8	420.7	436.2	441.6
45°	384.4	390.7	404.4	421.6	428.9
47.5°	364.4	371.7	387.1	407.1	415.3
50°	341.7	350.8	369.8	392.6	401.6
52.5°	319.9	330.8	351.7	377.1	388.9
55°	297.1	308.0	335.3	361.7	374.4
57.5°	271.7	286.2	316.2	346.2	359.8
60°	248.1	261.7	298.1	330.8	344.4
62.5°	222.6	240.8	279.9	314.4	328.0
65°	196.3	216.3	260.8	295.3	309.0
67.5°	172.7	194.5	241.7	276.2	289.9
70°	144.5	171.7	220.8	255.3	269.0
72.5°	118.1	148.1	199.0	232.6	245.3
75°	92.7	126.3	176.3	206.3	212.6
77.5°	69.1	104.5	152.7	165.4	160.8
80°	49.1	83.6	119.0	112.7	115.4
82.5°	31.8	63.6	73.6	83.6	86.3
85°	18.2	37.3	45.4	49.1	50.9
87.5°	8.2	13.6	18.2	18.2	17.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)