

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: P313506

Luminaire Tested: **24FCZ2-35-UNV-L83050-RDP-CP187-W2A-U-3500K**

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: P313506  
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: 24FCZ2-35-UNV-L83050-RDP-CP187-W2A-U-3500K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.187" POLYCARB SHEET  
Light Source: (168) 3500K 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: 73.1 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

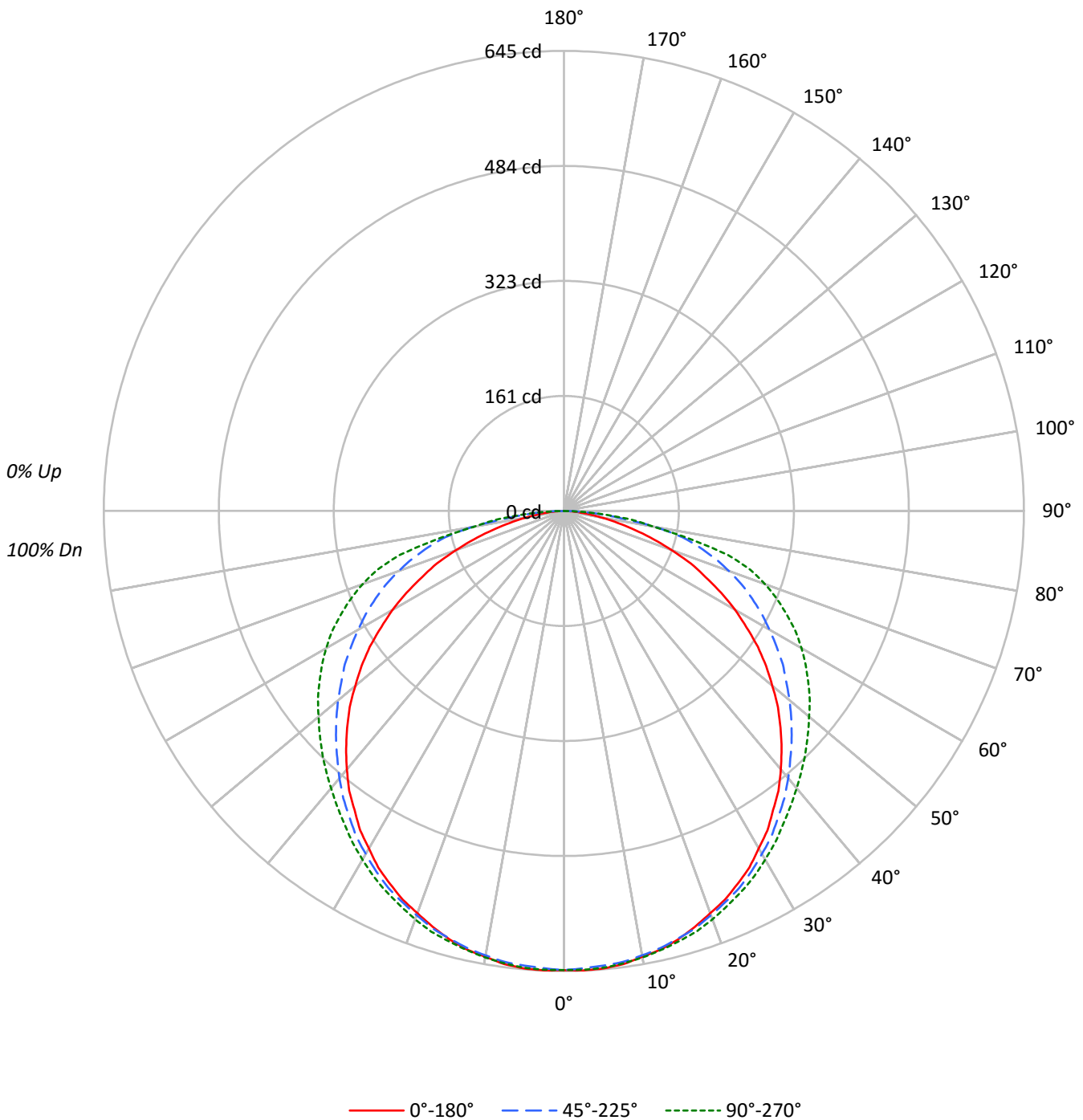
Input Watts (W): 28  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	866	866	866
5°	869	864	868
10°	867	864	868
15°	866	864	870
20°	859	864	872
25°	856	865	874
30°	849	863	877
35°	840	861	881
40°	831	860	892
45°	817	860	912
50°	799	865	939
55°	779	879	981
60°	746	896	1035
65°	698	928	1099
70°	635	971	1182
75°	539	1024	1235
80°	425	1031	999
85°	313	784	878



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	61.1	3.0
10°-20°	175.7	8.6
20°-30°	268.7	13.1
30°-40°	328.5	16.0
40°-50°	350.1	17.1
50°-60°	334.8	16.4
60°-70°	283.6	13.9
70°-80°	190.6	9.3
80°-90°	53.8	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°	505.5	24.7
0°-40°	834.1	40.7
0°-60°	1519.0	74.2
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°	644	644	644	644	644	
5°	644	643	640	643	643	61
15°	621	621	620	625	624	175
25°	577	579	583	588	589	266
35°	512	516	524	534	536	321
45°	430	437	452	471	479	331
55°	332	344	375	404	418	296
65°	219	242	291	330	345	218
75°	104	141	197	230	238	111
85°	20	42	51	55	57	25
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	643.7	643.7	643.7	643.7	643.7
2.5°	644.7	644.7	641.7	643.7	643.7
5°	643.7	642.7	639.7	642.7	642.7
7.5°	640.7	639.7	637.6	640.7	639.7
10°	634.6	634.6	632.6	635.6	635.6
12.5°	629.5	628.5	627.5	631.5	630.5
15°	621.4	621.4	620.4	625.4	624.4
17.5°	611.2	612.2	613.3	617.3	618.3
20°	600.1	602.1	603.1	609.2	609.2
22.5°	589.9	590.9	593.0	599.0	599.0
25°	576.7	578.7	582.8	587.9	588.9
27.5°	563.5	564.5	569.6	576.7	577.7
30°	546.3	549.3	555.4	563.5	564.5
32.5°	531.0	534.1	541.2	549.3	551.3
35°	511.7	515.8	523.9	534.1	536.1
37.5°	494.5	497.5	507.7	518.8	521.9
40°	473.1	479.2	489.4	502.6	507.7
42.5°	451.8	457.9	470.1	487.4	493.5
45°	429.5	436.6	451.8	471.1	479.2
47.5°	407.1	415.3	432.5	454.9	464.0
50°	381.8	391.9	413.2	438.6	448.8
52.5°	357.4	369.6	392.9	421.4	434.6
55°	332.0	344.2	374.7	404.1	418.3
57.5°	303.6	319.8	353.3	386.8	402.1
60°	277.2	292.4	333.0	369.6	384.8
62.5°	248.8	269.1	312.7	351.3	366.5
65°	219.3	241.6	291.4	330.0	345.2
67.5°	192.9	217.3	270.1	308.7	323.9
70°	161.4	191.9	246.7	285.3	300.5
72.5°	132.0	165.5	222.4	259.9	274.1
75°	103.6	141.1	197.0	230.5	237.6
77.5°	77.2	116.8	170.6	184.8	179.7
80°	54.8	93.4	133.0	125.9	128.9
82.5°	35.5	71.1	82.2	93.4	96.5
85°	20.3	41.6	50.8	54.8	56.9
87.5°	9.1	15.2	20.3	20.3	19.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)