

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: P313463

Luminaire Tested: **24FCZ2-30-UNV-L83050-RDP-CP250-W2A-U-4500K**

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: P313463  
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-CP250-W2A-U-4500K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" POLYCARB SHEET  
Light Source: (168) 4500K 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**

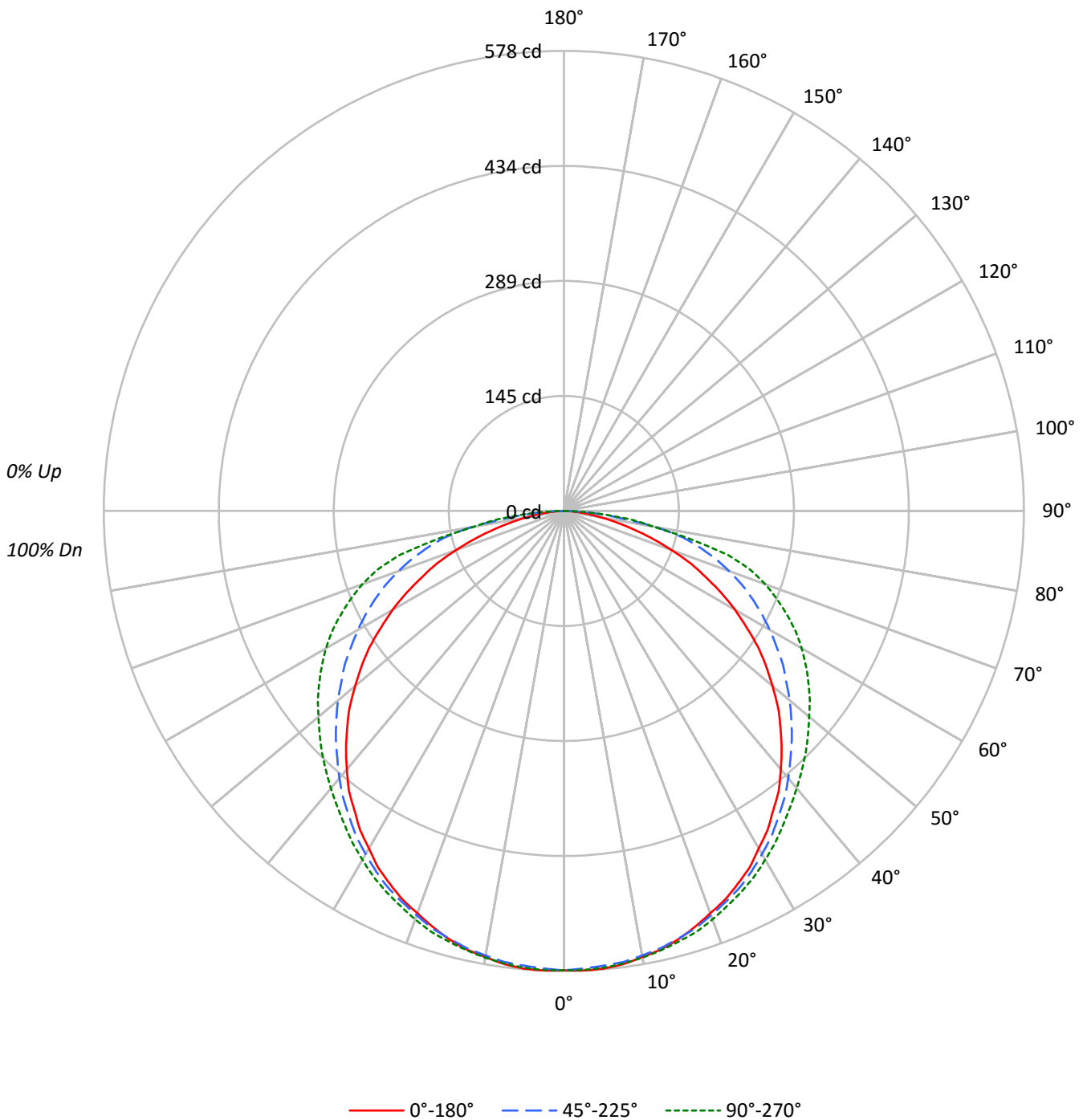
Lumens per Lamp: N/A  
Luminaire Lumens: 1835.0 lumens  
Efficiency: N/A  
Efficacy: 74.9 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 24.5  
Input Voltage (V): NR  
Input Current (A<sub>in</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°	776	776	776
5°	779	774	778
10°	777	775	778
15°	776	775	780
20°	770	774	782
25°	768	776	784
30°	761	774	786
35°	753	772	789
40°	745	771	799
45°	733	771	817
50°	716	775	842
55°	698	788	880
60°	669	803	928
65°	626	832	985
70°	569	870	1060
75°	482	918	1107
80°	380	924	896
85°	281	702	787



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	54.7	3.0
10°-20°	157.5	8.6
20°-30°	240.9	13.1
30°-40°	294.5	16.0
40°-50°	313.9	17.1
50°-60°	300.1	16.4
60°-70°	254.2	13.9
70°-80°	170.9	9.3
80°-90°	48.2	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°	453.2	24.7
0°-40°	747.7	40.7
0°-60°	1361.7	74.2
0°-90°	1835.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1835.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	577	577	577	577	577	
5°	577	576	573	576	576	55
15°	557	557	556	561	560	157
25°	517	519	522	527	528	238
35°	459	462	470	479	481	287
45°	385	391	405	422	430	297
55°	298	309	336	362	375	265
65°	197	217	261	296	310	195
75°	93	126	177	207	213	99
85°	18	37	46	49	51	23
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	577.1	577.1	577.1	577.1	577.1
2.5°	578.0	578.0	575.2	577.1	577.1
5°	577.1	576.1	573.4	576.1	576.1
7.5°	574.3	573.4	571.6	574.3	573.4
10°	568.9	568.9	567.0	569.8	569.8
12.5°	564.3	563.4	562.5	566.1	565.2
15°	557.0	557.0	556.1	560.7	559.8
17.5°	547.9	548.8	549.7	553.4	554.3
20°	537.9	539.7	540.6	546.1	546.1
22.5°	528.8	529.7	531.5	537.0	537.0
25°	517.0	518.8	522.4	527.0	527.9
27.5°	505.2	506.1	510.6	517.0	517.9
30°	489.7	492.4	497.9	505.2	506.1
32.5°	476.0	478.8	485.1	492.4	494.2
35°	458.7	462.4	469.7	478.8	480.6
37.5°	443.3	446.0	455.1	465.1	467.8
40°	424.1	429.6	438.7	450.5	455.1
42.5°	405.0	410.5	421.4	436.9	442.3
45°	385.0	391.4	405.0	422.3	429.6
47.5°	365.0	372.3	387.7	407.8	416.0
50°	342.2	351.3	370.4	393.2	402.3
52.5°	320.4	331.3	352.2	377.7	389.6
55°	297.6	308.6	335.9	362.3	375.0
57.5°	272.1	286.7	316.7	346.8	360.4
60°	248.5	262.1	298.5	331.3	345.0
62.5°	223.0	241.2	280.3	314.9	328.6
65°	196.6	216.6	261.2	295.8	309.5
67.5°	172.9	194.8	242.1	276.7	290.3
70°	144.7	172.0	221.2	255.8	269.4
72.5°	118.3	148.4	199.3	233.0	245.7
75°	92.8	126.5	176.6	206.6	213.0
77.5°	69.2	104.7	152.9	165.7	161.1
80°	49.1	83.7	119.2	112.9	115.6
82.5°	31.9	63.7	73.7	83.7	86.5
85°	18.2	37.3	45.5	49.1	51.0
87.5°	8.2	13.7	18.2	18.2	17.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)