

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: P309863

Luminaire Tested: **24FCZ2-30-UNV-L82765-RDP-CA08-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: P309863  
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-L82765-RDP-CA08-W2A-U-4000K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" ACRYLIC 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**

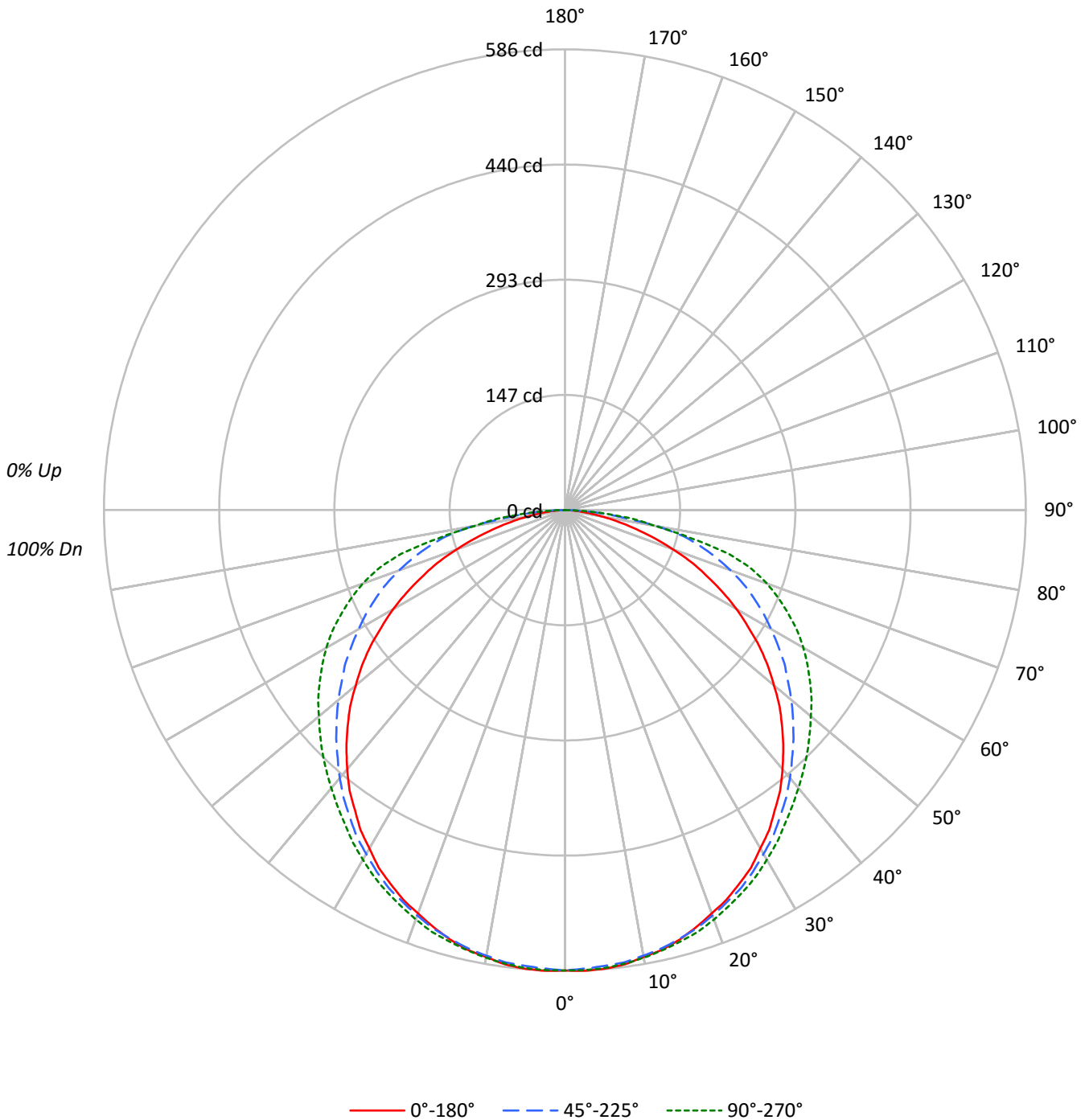
Lumens per Lamp: N/A  
Luminaire Lumens: 1862.0 lumens  
Efficiency: N/A  
Efficacy: 78.6 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 23.7  
Input Voltage (V): NR  
Input Current (A<sub>in</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°	788	788	788
5°	791	786	790
10°	789	786	790
15°	787	786	791
20°	781	786	793
25°	779	787	795
30°	772	785	798
35°	765	783	801
40°	756	782	811
45°	743	782	829
50°	727	787	854
55°	708	799	893
60°	678	815	942
65°	635	844	1000
70°	578	883	1076
75°	490	932	1123
80°	387	938	909
85°	286	713	798



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	55.5	3.0
10°-20°	159.9	8.6
20°-30°	244.5	13.1
30°-40°	298.8	16.0
40°-50°	318.5	17.1
50°-60°	304.5	16.4
60°-70°	258.0	13.9
70°-80°	173.4	9.3
80°-90°	48.9	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°	459.9	24.7
0°-40°	758.7	40.7
0°-60°	1381.7	74.2
0°-90°	1862.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1862.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	586	586	586	586	586	
5°	586	585	582	585	585	56
15°	565	565	564	569	568	159
25°	525	526	530	535	536	242
35°	466	469	477	486	488	292
45°	391	397	411	428	436	301
55°	302	313	341	368	380	269
65°	200	220	265	300	314	198
75°	94	128	179	210	216	101
85°	18	38	46	50	52	23
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	585.5	585.5	585.5	585.5	585.5
2.5°	586.5	586.5	583.7	585.5	585.5
5°	585.5	584.6	581.9	584.6	584.6
7.5°	582.8	581.9	580.0	582.8	581.9
10°	577.2	577.2	575.4	578.2	578.2
12.5°	572.6	571.7	570.8	574.5	573.5
15°	565.2	565.2	564.3	568.9	568.0
17.5°	556.0	556.9	557.8	561.5	562.5
20°	545.8	547.7	548.6	554.1	554.1
22.5°	536.6	537.5	539.4	544.9	544.9
25°	524.6	526.4	530.1	534.7	535.7
27.5°	512.6	513.5	518.1	524.6	525.5
30°	496.9	499.7	505.2	512.6	513.5
32.5°	483.0	485.8	492.3	499.7	501.5
35°	465.5	469.2	476.6	485.8	487.6
37.5°	449.8	452.6	461.8	471.9	474.7
40°	430.4	435.9	445.2	457.2	461.8
42.5°	411.0	416.5	427.6	443.3	448.9
45°	390.7	397.1	411.0	428.5	435.9
47.5°	370.4	377.7	393.4	413.8	422.1
50°	347.3	356.5	375.9	399.0	408.2
52.5°	325.1	336.2	357.4	383.3	395.3
55°	302.0	313.1	340.8	367.6	380.5
57.5°	276.1	290.9	321.4	351.9	365.7
60°	252.1	266.0	302.9	336.2	350.0
62.5°	226.3	244.7	284.5	319.6	333.4
65°	199.5	219.8	265.1	300.2	314.0
67.5°	175.5	197.6	245.7	280.8	294.6
70°	146.8	174.6	224.4	259.5	273.4
72.5°	120.1	150.5	202.3	236.4	249.4
75°	94.2	128.4	179.2	209.7	216.1
77.5°	70.2	106.2	155.2	168.1	163.5
80°	49.9	85.0	121.0	114.5	117.3
82.5°	32.3	64.7	74.8	85.0	87.7
85°	18.5	37.9	46.2	49.9	51.7
87.5°	8.3	13.9	18.5	18.5	17.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)