

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: P309954

Luminaire Tested: **24FCZ2-35-UNV-L82765-RDP-CA08-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: P309954  
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-L82765-RDP-CA08-W2A-U-4500K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" ACRYLIC 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**

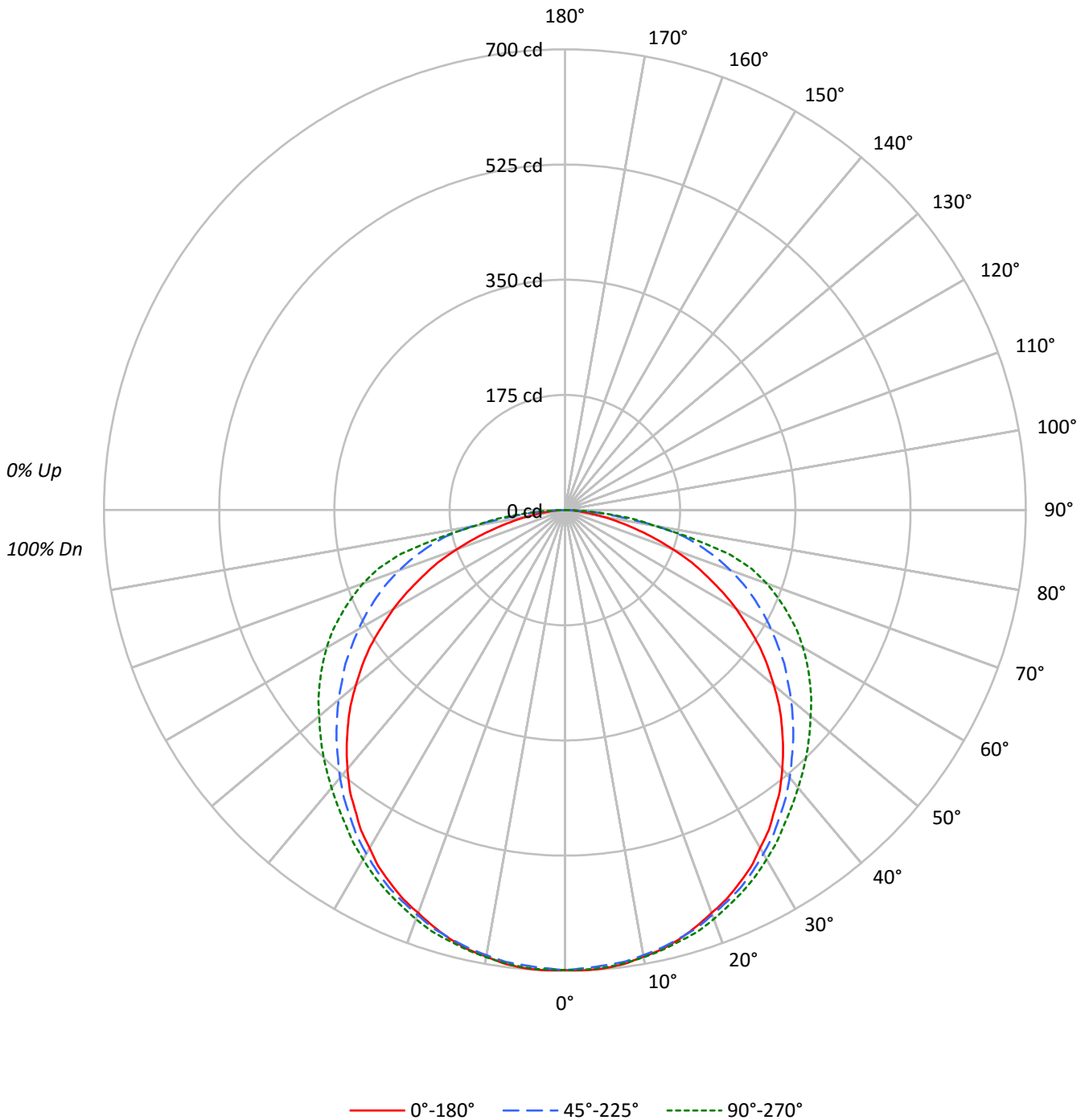
Lumens per Lamp: N/A  
Luminaire Lumens: 2222.0 lumens  
Efficiency: N/A  
Efficacy: 78.0 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 28.5  
Input Voltage (V): NR  
Input Current (A<sub>in</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	68	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°	940	940	940
5°	944	938	942
10°	941	938	943
15°	940	938	944
20°	933	937	947
25°	929	939	949
30°	921	937	952
35°	912	934	956
40°	902	933	968
45°	887	933	990
50°	867	939	1020
55°	845	954	1065
60°	810	973	1124
65°	758	1007	1193
70°	689	1054	1283
75°	584	1111	1341
80°	461	1119	1085
85°	340	851	953



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	66.3	3.0
10°-20°	190.8	8.6
20°-30°	291.7	13.1
30°-40°	356.6	16.0
40°-50°	380.1	17.1
50°-60°	363.4	16.4
60°-70°	307.9	13.9
70°-80°	206.9	9.3
80°-90°	58.4	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°	548.8	24.7
0°-40°	905.4	40.7
0°-60°	1648.9	74.2
0°-90°	2222.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2222.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	699	699	699	699	699	
5°	699	698	694	698	698	66
15°	674	674	673	679	678	190
25°	626	628	633	638	639	289
35°	556	560	569	580	582	348
45°	466	474	490	511	520	360
55°	360	374	407	439	454	321
65°	238	262	316	358	375	236
75°	112	153	214	250	258	120
85°	22	45	55	60	62	27
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	698.8	698.8	698.8	698.8	698.8
2.5°	699.9	699.9	696.6	698.8	698.8
5°	698.8	697.7	694.3	697.7	697.7
7.5°	695.4	694.3	692.1	695.4	694.3
10°	688.8	688.8	686.6	689.9	689.9
12.5°	683.3	682.2	681.1	685.5	684.4
15°	674.5	674.5	673.4	678.9	677.8
17.5°	663.5	664.6	665.7	670.1	671.2
20°	651.4	653.6	654.7	661.3	661.3
22.5°	640.3	641.4	643.6	650.3	650.3
25°	626.0	628.2	632.6	638.1	639.2
27.5°	611.7	612.8	618.3	626.0	627.1
30°	593.0	596.3	602.9	611.7	612.8
32.5°	576.4	579.7	587.4	596.3	598.5
35°	555.5	559.9	568.7	579.7	581.9
37.5°	536.7	540.0	551.1	563.2	566.5
40°	513.6	520.2	531.2	545.6	551.1
42.5°	490.5	497.1	510.3	529.0	535.6
45°	466.2	473.9	490.5	511.4	520.2
47.5°	442.0	450.8	469.5	493.8	503.7
50°	414.4	425.4	448.6	476.1	487.1
52.5°	388.0	401.2	426.5	457.4	471.7
55°	360.4	373.6	406.7	438.7	454.1
57.5°	329.5	347.2	383.5	419.9	436.4
60°	300.9	317.4	361.5	401.2	417.7
62.5°	270.0	292.1	339.5	381.3	397.9
65°	238.1	262.3	316.3	358.2	374.7
67.5°	209.4	235.9	293.2	335.0	351.6
70°	175.2	208.3	267.8	309.7	326.2
72.5°	143.3	179.6	241.4	282.1	297.6
75°	112.4	153.2	213.8	250.2	257.9
77.5°	83.8	126.7	185.2	200.6	195.1
80°	59.5	101.4	144.4	136.7	140.0
82.5°	38.6	77.1	89.3	101.4	104.7
85°	22.0	45.2	55.1	59.5	61.7
87.5°	9.9	16.5	22.0	22.0	20.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)