

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: P313511

Luminaire Tested: **24FCZ2-35-UNV-L83050-RDP-CP250-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: P313511  
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-CP250-W2A-U-3500K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" 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: 2030.0 lumens  
Efficiency: N/A  
Efficacy: 72.5 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

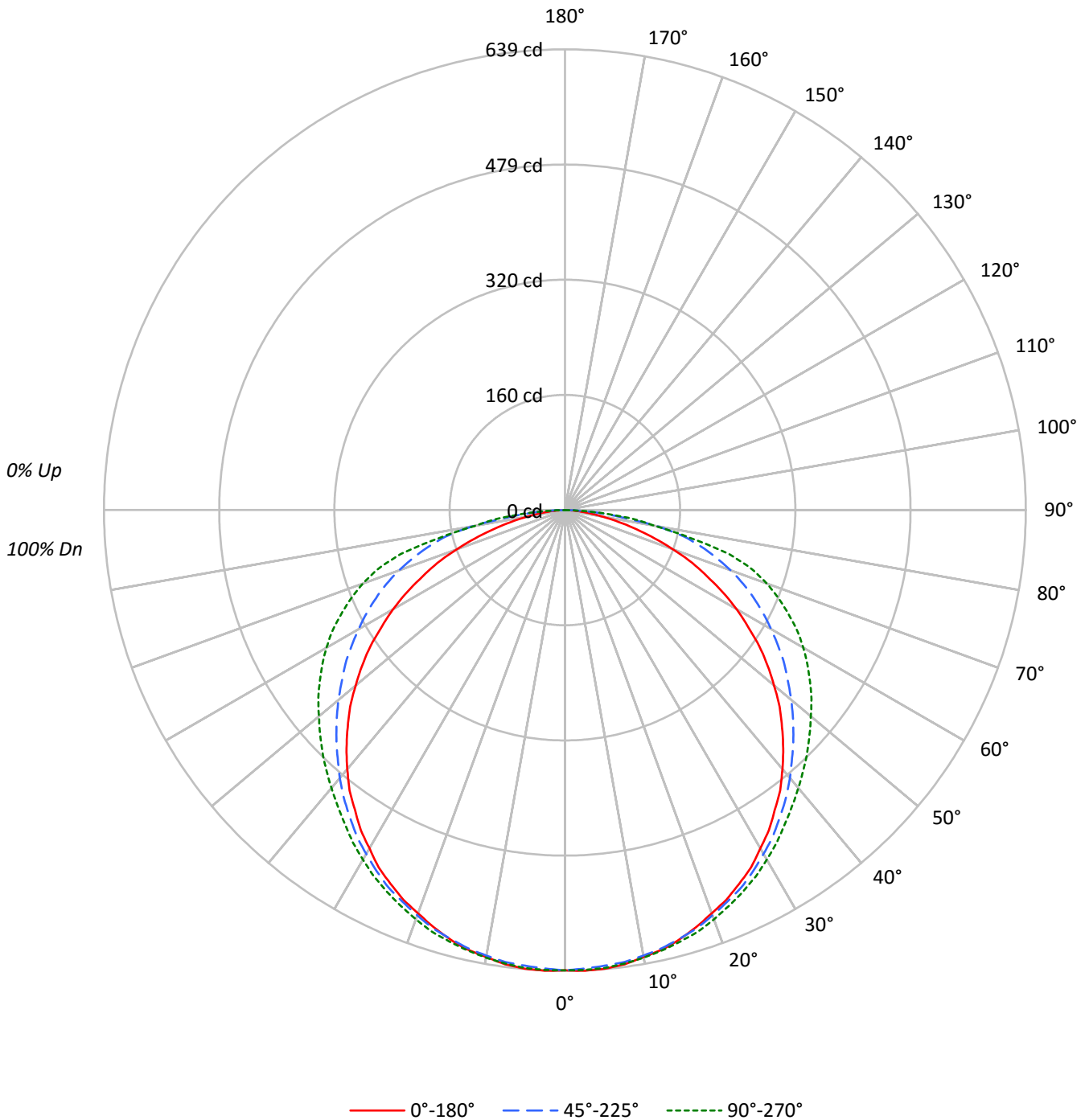
Input Watts (W): 28  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	859	859	859
5°	862	857	861
10°	860	857	861
15°	858	857	863
20°	852	856	865
25°	849	858	867
30°	842	856	870
35°	834	853	873
40°	824	852	884
45°	810	853	904
50°	792	858	932
55°	772	871	973
60°	740	889	1027
65°	692	920	1090
70°	630	963	1172
75°	534	1015	1225
80°	422	1022	991
85°	310	777	871



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	60.6	3.0
10°-20°	174.3	8.6
20°-30°	266.5	13.1
30°-40°	325.8	16.0
40°-50°	347.2	17.1
50°-60°	332.0	16.4
60°-70°	281.2	13.9
70°-80°	189.0	9.3
80°-90°	53.3	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°	501.3	24.7
0°-40°	827.1	40.7
0°-60°	1506.4	74.2
0°-90°	2030.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2030.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	638	638	638	638	638	
5°	638	637	634	637	637	61
15°	616	616	615	620	619	174
25°	572	574	578	583	584	264
35°	508	512	520	530	532	318
45°	426	433	448	467	475	329
55°	329	341	372	401	415	293
65°	218	240	289	327	342	216
75°	103	140	195	229	236	110
85°	20	41	50	54	56	25
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	638.4	638.4	638.4	638.4	638.4
2.5°	639.4	639.4	636.4	638.4	638.4
5°	638.4	637.4	634.3	637.4	637.4
7.5°	635.4	634.3	632.3	635.4	634.3
10°	629.3	629.3	627.3	630.3	630.3
12.5°	624.3	623.3	622.3	626.3	625.3
15°	616.2	616.2	615.2	620.3	619.2
17.5°	606.2	607.2	608.2	612.2	613.2
20°	595.1	597.1	598.1	604.1	604.1
22.5°	585.0	586.0	588.0	594.1	594.1
25°	571.9	573.9	578.0	583.0	584.0
27.5°	558.8	559.8	564.9	571.9	572.9
30°	541.7	544.7	550.8	558.8	559.8
32.5°	526.6	529.6	536.7	544.7	546.7
35°	507.5	511.5	519.6	529.6	531.6
37.5°	490.4	493.4	503.5	514.5	517.5
40°	469.2	475.3	485.3	498.4	503.5
42.5°	448.1	454.1	466.2	483.3	489.4
45°	425.9	433.0	448.1	467.2	475.3
47.5°	403.8	411.8	428.9	451.1	460.2
50°	378.6	388.7	409.8	435.0	445.1
52.5°	354.4	366.5	389.7	417.9	431.0
55°	329.3	341.3	371.5	400.7	414.8
57.5°	301.1	317.2	350.4	383.6	398.7
60°	274.9	290.0	330.3	366.5	381.6
62.5°	246.7	266.8	310.1	348.4	363.5
65°	217.5	239.6	289.0	327.2	342.3
67.5°	191.3	215.5	267.8	306.1	321.2
70°	160.1	190.3	244.7	282.9	298.0
72.5°	130.9	164.1	220.5	257.8	271.9
75°	102.7	140.0	195.3	228.6	235.6
77.5°	76.5	115.8	169.2	183.3	178.2
80°	54.4	92.6	131.9	124.9	127.9
82.5°	35.2	70.5	81.6	92.6	95.7
85°	20.1	41.3	50.3	54.4	56.4
87.5°	9.1	15.1	20.1	20.1	19.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)