

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: P313561

Luminaire Tested: **24FCZ2-40-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: P313561  
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: 24FCZ2-40-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: 2310.0 lumens  
Efficiency: N/A  
Efficacy: 70.6 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

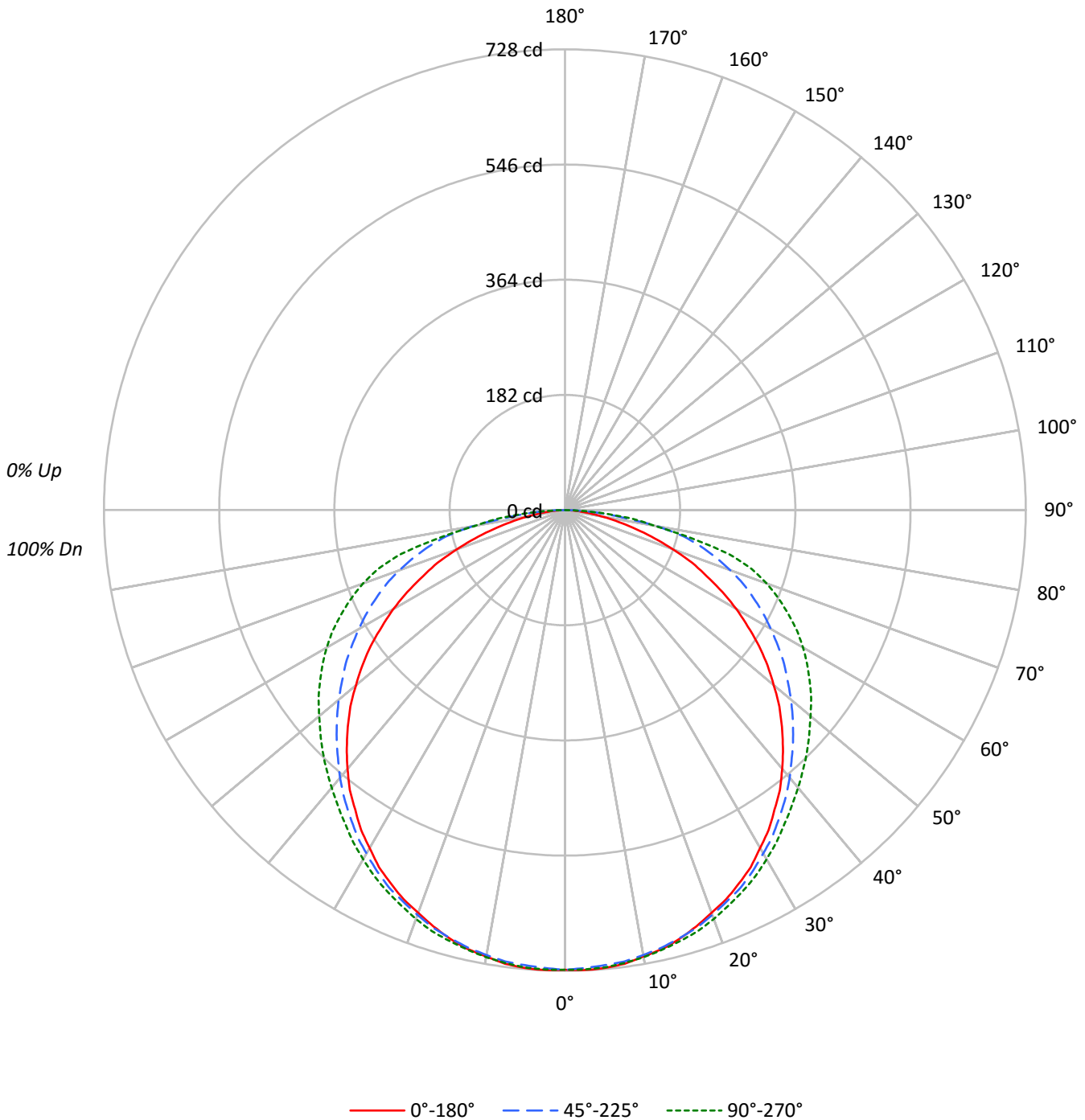
Input Watts (W): 32.7  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	977	977	977
5°	981	975	980
10°	978	975	980
15°	977	975	982
20°	970	975	984
25°	966	976	987
30°	958	974	990
35°	949	971	994
40°	938	970	1006
45°	922	970	1029
50°	902	976	1060
55°	879	992	1107
60°	842	1011	1169
65°	788	1047	1240
70°	717	1095	1334
75°	608	1156	1394
80°	480	1163	1127
85°	354	885	991



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	68.9	3.0
10°-20°	198.3	8.6
20°-30°	303.3	13.1
30°-40°	370.7	16.0
40°-50°	395.1	17.1
50°-60°	377.8	16.4
60°-70°	320.0	13.9
70°-80°	215.1	9.3
80°-90°	60.7	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°	570.5	24.7
0°-40°	941.2	40.7
0°-60°	1714.2	74.2
0°-90°	2310.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2310.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	726	726	726	726	726	
5°	726	725	722	725	725	69
15°	701	701	700	706	705	198
25°	651	653	658	663	665	300
35°	578	582	591	603	605	362
45°	485	493	510	532	541	374
55°	375	388	423	456	472	334
65°	248	273	329	372	390	246
75°	117	159	222	260	268	125
85°	23	47	57	62	64	28
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	726.4	726.4	726.4	726.4	726.4
2.5°	727.6	727.6	724.1	726.4	726.4
5°	726.4	725.3	721.8	725.3	725.3
7.5°	723.0	721.8	719.6	723.0	721.8
10°	716.1	716.1	713.8	717.3	717.3
12.5°	710.4	709.2	708.1	712.7	711.5
15°	701.2	701.2	700.1	705.8	704.7
17.5°	689.8	690.9	692.1	696.6	697.8
20°	677.2	679.5	680.6	687.5	687.5
22.5°	665.7	666.8	669.1	676.0	676.0
25°	650.8	653.1	657.7	663.4	664.6
27.5°	635.9	637.1	642.8	650.8	652.0
30°	616.4	619.9	626.7	635.9	637.1
32.5°	599.2	602.7	610.7	619.9	622.2
35°	577.5	582.1	591.2	602.7	605.0
37.5°	558.0	561.4	572.9	585.5	588.9
40°	533.9	540.8	552.3	567.2	572.9
42.5°	509.9	516.7	530.5	550.0	556.9
45°	484.7	492.7	509.9	531.6	540.8
47.5°	459.5	468.6	488.1	513.3	523.6
50°	430.8	442.3	466.3	495.0	506.4
52.5°	403.3	417.1	443.4	475.5	490.4
55°	374.7	388.4	422.8	456.0	472.1
57.5°	342.6	360.9	398.7	436.5	453.7
60°	312.8	330.0	375.8	417.1	434.3
62.5°	280.7	303.6	352.9	396.4	413.6
65°	247.5	272.7	328.8	372.4	389.6
67.5°	217.7	245.2	304.8	348.3	365.5
70°	182.2	216.6	278.4	322.0	339.2
72.5°	149.0	186.8	250.9	293.3	309.4
75°	116.9	159.3	222.3	260.1	268.1
77.5°	87.1	131.8	192.5	208.5	202.8
80°	61.9	105.4	150.1	142.1	145.5
82.5°	40.1	80.2	92.8	105.4	108.8
85°	22.9	47.0	57.3	61.9	64.2
87.5°	10.3	17.2	22.9	22.9	21.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)