

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: P309896

Luminaire Tested: **24FCZ2-30-UNV-L82765-RDP-CP250-W2A-U-2700K**

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: P309896
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-CP250-W2A-U-2700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" POLYCARB SHEET
Light Source: (168) 2700K 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: 1588.0 lumens
Efficiency: N/A
Efficacy: 67.9 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

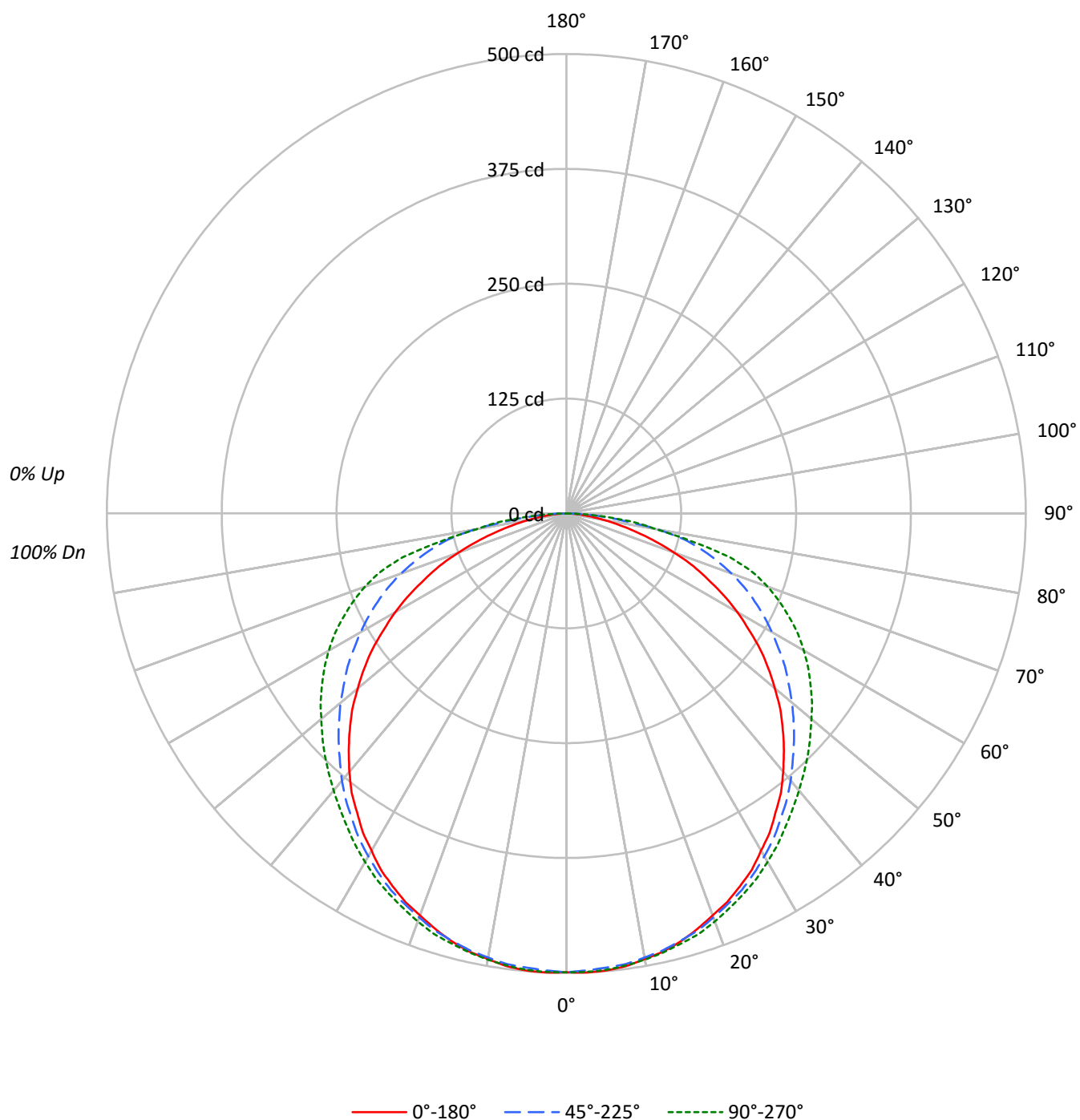
Input Watts (W): 23.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				0
RW	70	50	30	10	70	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		100
1	108	103	98	94	105	100	96	92	96	93	89		92	89	87		82
2	97	89	81	75	95	87	80	74	83	77	72		80	75	71		67
3	88	77	68	62	86	76	67	61	72	66	60		70	64	59		56
4	81	68	59	52	78	67	58	51	64	57	51		62	55	50		47
5	74	60	51	44	72	59	51	44	57	49	43		55	48	43		40
6	68	54	45	38	66	53	45	38	51	44	38		50	43	37		35
7	63	49	40	34	61	48	40	34	47	39	33		45	38	33		31
8	59	45	36	30	57	44	36	30	43	35	30		41	34	29		27
9	55	41	33	27	53	40	32	27	39	32	27		38	31	26		24
10	51	38	30	24	50	37	29	24	36	29	24		35	29	24		22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	672	672	672
5°	675	670	673
10°	673	670	674
15°	672	670	675
20°	667	670	677
25°	664	671	678
30°	658	669	680
35°	652	668	683
40°	645	667	692
45°	634	667	707
50°	620	671	729
55°	604	682	761
60°	579	695	803
65°	542	720	853
70°	493	753	917
75°	417	794	958
80°	329	800	775
85°	244	608	681



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	47.4	3.0
10°-20°	136.3	8.6
20°-30°	208.5	13.1
30°-40°	254.9	16.0
40°-50°	271.6	17.1
50°-60°	259.7	16.4
60°-70°	220.0	13.9
70°-80°	147.9	9.3
80°-90°	41.7	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°	392.2	24.7
0°-40°	647.1	40.7
0°-60°	1178.4	74.2
0°-90°	1588.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1588.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	499	499	499	499	499	
5°	499	499	496	499	499	47
15°	482	482	481	485	484	136
25°	447	449	452	456	457	206
35°	397	400	406	414	416	249
45°	333	339	350	366	372	257
55°	258	267	291	314	324	229
65°	170	188	226	256	268	169
75°	80	110	153	179	184	86
85°	16	32	39	42	44	20
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	499.4	499.4	499.4	499.4	499.4
2.5°	500.2	500.2	497.8	499.4	499.4
5°	499.4	498.6	496.2	498.6	498.6
7.5°	497.0	496.2	494.7	497.0	496.2
10°	492.3	492.3	490.7	493.1	493.1
12.5°	488.4	487.6	486.8	489.9	489.1
15°	482.1	482.1	481.3	485.2	484.4
17.5°	474.2	475.0	475.8	478.9	479.7
20°	465.5	467.1	467.9	472.6	472.6
22.5°	457.6	458.4	460.0	464.7	464.7
25°	447.4	449.0	452.1	456.1	456.8
27.5°	437.2	437.9	441.9	447.4	448.2
30°	423.8	426.1	430.9	437.2	437.9
32.5°	411.9	414.3	419.8	426.1	427.7
35°	397.0	400.1	406.4	414.3	415.9
37.5°	383.6	386.0	393.8	402.5	404.9
40°	367.1	371.8	379.7	389.9	393.8
42.5°	350.5	355.2	364.7	378.1	382.8
45°	333.2	338.7	350.5	365.5	371.8
47.5°	315.9	322.2	335.5	352.9	360.0
50°	296.2	304.0	320.6	340.3	348.1
52.5°	277.3	286.7	304.8	326.9	337.1
55°	257.6	267.0	290.6	313.5	324.5
57.5°	235.5	248.1	274.1	300.1	311.9
60°	215.0	226.8	258.4	286.7	298.5
62.5°	193.0	208.7	242.6	272.5	284.3
65°	170.1	187.5	226.1	256.0	267.8
67.5°	149.7	168.6	209.5	239.5	251.3
70°	125.2	148.9	191.4	221.3	233.1
72.5°	102.4	128.4	172.5	201.6	212.7
75°	80.3	109.5	152.8	178.8	184.3
77.5°	59.9	90.6	132.3	143.4	139.4
80°	42.5	72.5	103.2	97.7	100.0
82.5°	27.6	55.1	63.8	72.5	74.8
85°	15.8	32.3	39.4	42.5	44.1
87.5°	7.1	11.8	15.8	15.8	15.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)