

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: P313451

Luminaire Tested: **24FCZ2-30-UNV-L83050-RDP-CP125-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: P313451
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-L83050-RDP-CP125-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" 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: 1822.0 lumens
Efficiency: N/A
Efficacy: 77.9 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

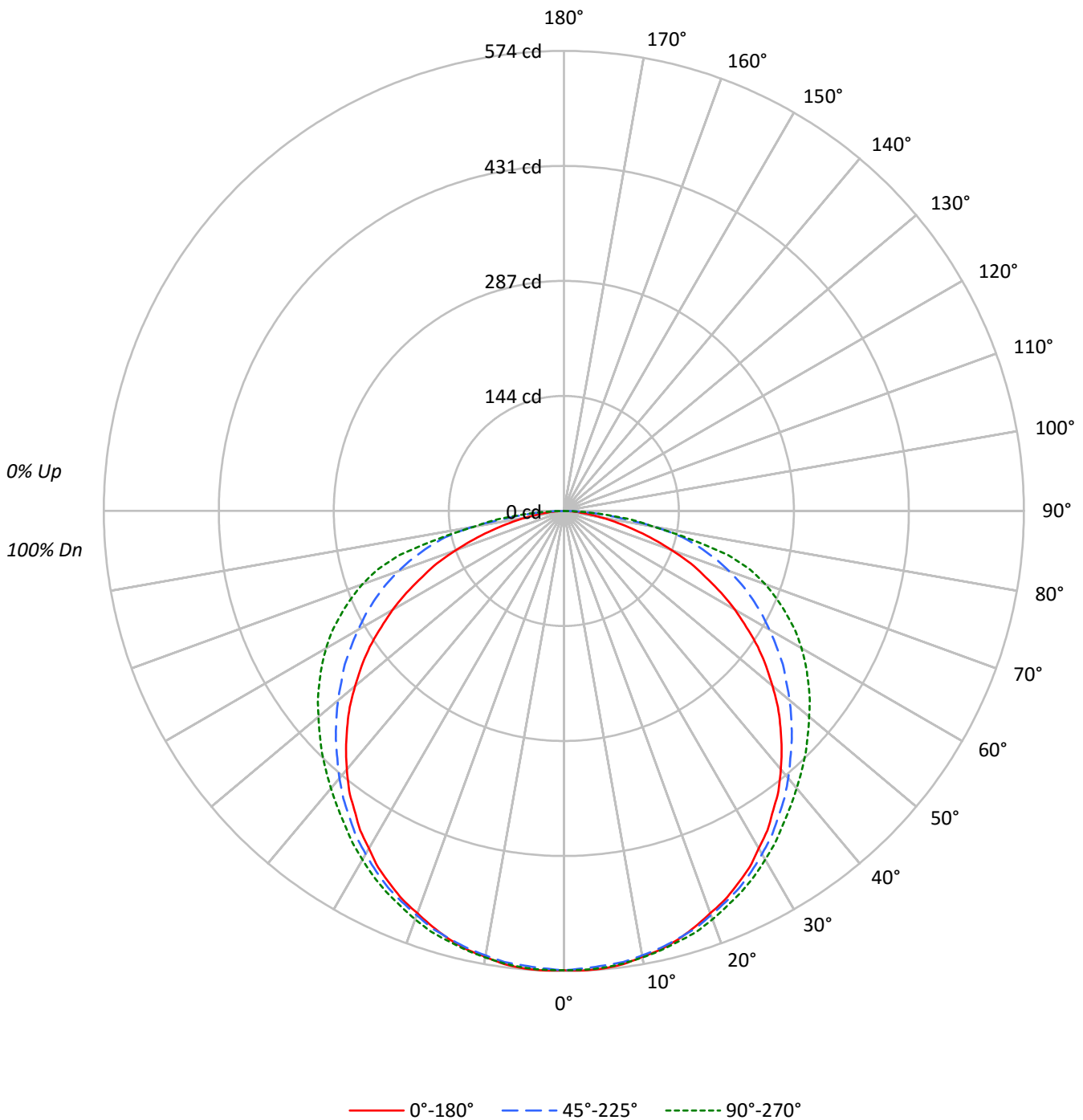
Input Watts (W): 23.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	771	771	771
5°	774	769	773
10°	772	769	773
15°	770	769	774
20°	765	769	776
25°	762	770	778
30°	755	768	781
35°	748	766	784
40°	740	765	794
45°	727	765	812
50°	711	770	836
55°	693	782	873
60°	664	798	922
65°	621	826	978
70°	565	864	1052
75°	479	911	1099
80°	378	917	890
85°	279	698	781



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	54.4	3.0
10°-20°	156.4	8.6
20°-30°	239.2	13.1
30°-40°	292.4	16.0
40°-50°	311.7	17.1
50°-60°	298.0	16.4
60°-70°	252.4	13.9
70°-80°	169.7	9.3
80°-90°	47.9	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°	450.0	24.7
0°-40°	742.4	40.7
0°-60°	1352.1	74.2
0°-90°	1822.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1822.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	573	573	573	573	573	
5°	573	572	569	572	572	54
15°	553	553	552	557	556	156
25°	513	515	519	523	524	237
35°	456	459	466	475	477	285
45°	382	389	402	419	427	295
55°	296	306	334	360	372	263
65°	195	215	259	294	307	194
75°	92	126	175	205	212	99
85°	18	37	45	49	51	22
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	573.0	573.0	573.0	573.0	573.0
2.5°	573.9	573.9	571.2	573.0	573.0
5°	573.0	572.1	569.4	572.1	572.1
7.5°	570.3	569.4	567.5	570.3	569.4
10°	564.8	564.8	563.0	565.7	565.7
12.5°	560.3	559.4	558.5	562.1	561.2
15°	553.1	553.1	552.2	556.7	555.8
17.5°	544.0	545.0	545.9	549.5	550.4
20°	534.1	535.9	536.8	542.2	542.2
22.5°	525.1	526.0	527.8	533.2	533.2
25°	513.3	515.1	518.7	523.3	524.2
27.5°	501.6	502.5	507.0	513.3	514.2
30°	486.2	488.9	494.3	501.6	502.5
32.5°	472.7	475.4	481.7	488.9	490.7
35°	455.5	459.1	466.3	475.4	477.2
37.5°	440.1	442.8	451.9	461.8	464.5
40°	421.1	426.6	435.6	447.3	451.9
42.5°	402.2	407.6	418.4	433.8	439.2
45°	382.3	388.6	402.2	419.3	426.6
47.5°	362.4	369.6	385.0	404.9	413.0
50°	339.8	348.8	367.8	390.4	399.5
52.5°	318.1	329.0	349.7	375.0	386.8
55°	295.5	306.4	333.5	359.7	372.3
57.5°	270.2	284.7	314.5	344.3	357.9
60°	246.7	260.3	296.4	329.0	342.5
62.5°	221.4	239.5	278.3	312.7	326.2
65°	195.2	215.1	259.4	293.7	307.3
67.5°	171.7	193.4	240.4	274.7	288.3
70°	143.7	170.8	219.6	253.9	267.5
72.5°	117.5	147.3	197.9	231.4	244.0
75°	92.2	125.6	175.3	205.1	211.5
77.5°	68.7	103.9	151.8	164.5	160.0
80°	48.8	83.1	118.4	112.1	114.8
82.5°	31.6	63.3	73.2	83.1	85.9
85°	18.1	37.1	45.2	48.8	50.6
87.5°	8.1	13.6	18.1	18.1	17.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)