

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: P313447

Luminaire Tested: **24FCZ2-30-UNV-L83050-RDP-CA125-W2A-U-4000K**

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: P313447
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-CA125-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" ACRYLIC SHEET
Light Source: (168) 4000K 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: 1951.0 lumens
Efficiency: N/A
Efficacy: 81.6 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

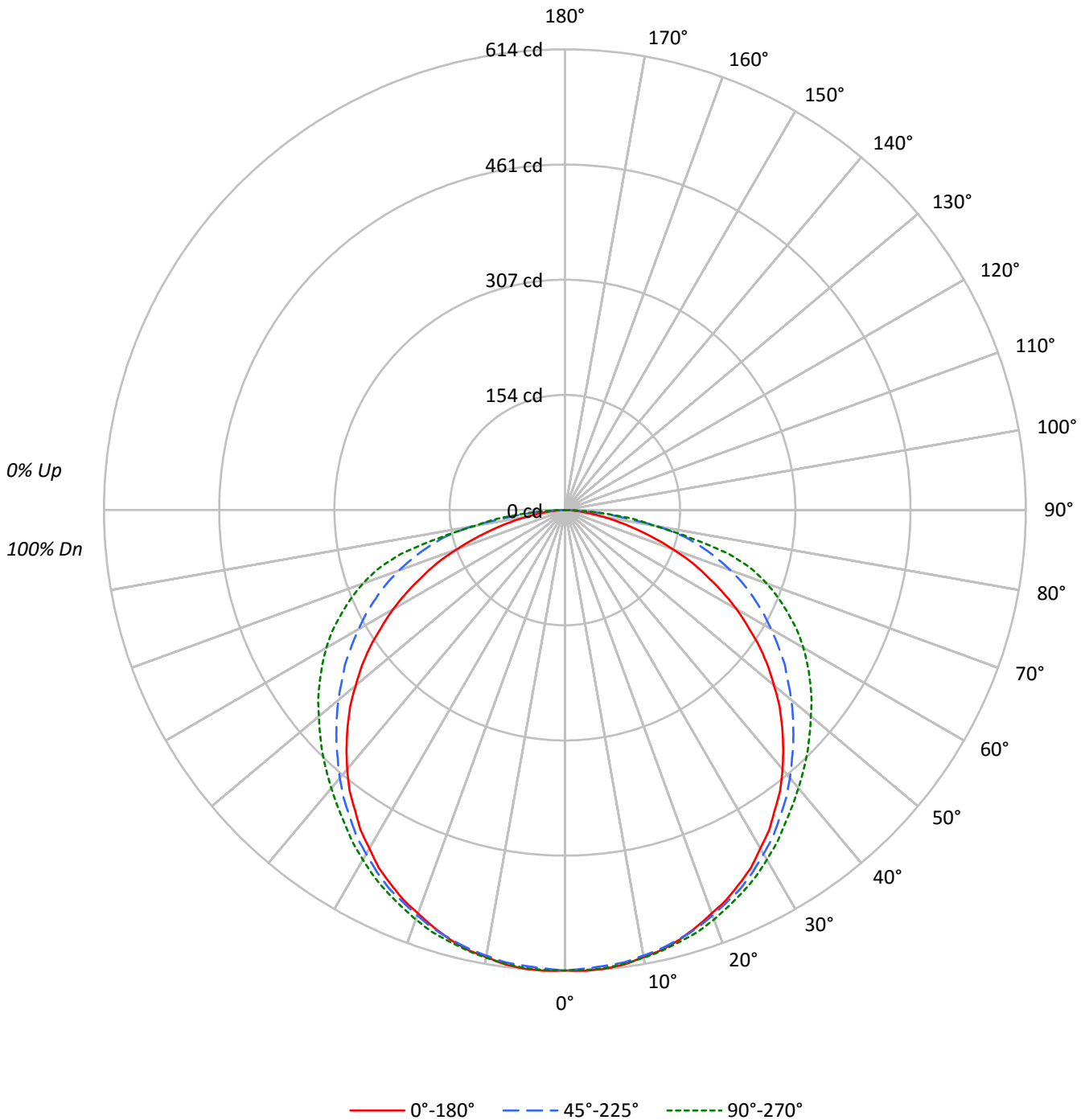
Input Watts (W): 23.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	825	825	825
5°	829	823	827
10°	826	824	828
15°	825	824	829
20°	819	823	831
25°	816	825	833
30°	809	822	836
35°	801	820	839
40°	792	819	850
45°	779	819	869
50°	762	825	895
55°	742	838	935
60°	711	854	987
65°	665	884	1047
70°	605	925	1127
75°	513	976	1177
80°	405	982	952
85°	299	747	837



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	58.2	3.0
10°-20°	167.5	8.6
20°-30°	256.1	13.1
30°-40°	313.1	16.0
40°-50°	333.7	17.1
50°-60°	319.1	16.4
60°-70°	270.3	13.9
70°-80°	181.7	9.3
80°-90°	51.3	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°	481.8	24.7
0°-40°	795.0	40.7
0°-60°	1447.8	74.2
0°-90°	1951.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1951.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	614	614	614	614	614	
5°	614	613	610	613	613	58
15°	592	592	591	596	595	167
25°	550	552	556	560	561	253
35°	488	492	499	509	511	306
45°	409	416	431	449	457	316
55°	316	328	357	385	399	282
65°	209	230	278	314	329	208
75°	99	134	188	220	226	106
85°	19	40	48	52	54	24
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	613.5	613.5	613.5	613.5	613.5
2.5°	614.5	614.5	611.6	613.5	613.5
5°	613.5	612.6	609.7	612.6	612.6
7.5°	610.6	609.7	607.7	610.6	609.7
10°	604.8	604.8	602.9	605.8	605.8
12.5°	600.0	599.0	598.1	601.9	601.0
15°	592.2	592.2	591.3	596.1	595.1
17.5°	582.6	583.5	584.5	588.4	589.3
20°	571.9	573.9	574.8	580.6	580.6
22.5°	562.2	563.2	565.1	571.0	571.0
25°	549.7	551.6	555.5	560.3	561.3
27.5°	537.1	538.1	542.9	549.7	550.6
30°	520.6	523.5	529.3	537.1	538.1
32.5°	506.1	509.0	515.8	523.5	525.5
35°	487.7	491.6	499.3	509.0	511.0
37.5°	471.3	474.2	483.9	494.5	497.4
40°	451.0	456.8	466.4	479.0	483.9
42.5°	430.6	436.4	448.1	464.5	470.3
45°	409.3	416.1	430.6	449.0	456.8
47.5°	388.1	395.8	412.2	433.5	442.2
50°	363.9	373.5	393.9	418.1	427.7
52.5°	340.6	352.2	374.5	401.6	414.2
55°	316.4	328.1	357.1	385.2	398.7
57.5°	289.3	304.8	336.8	368.7	383.2
60°	264.2	278.7	317.4	352.2	366.8
62.5°	237.1	256.4	298.1	334.8	349.3
65°	209.0	230.3	277.7	314.5	329.0
67.5°	183.9	207.1	257.4	294.2	308.7
70°	153.9	182.9	235.2	271.9	286.4
72.5°	125.8	157.7	211.9	247.7	261.3
75°	98.7	134.5	187.7	219.7	226.4
77.5°	73.5	111.3	162.6	176.1	171.3
80°	52.3	89.0	126.8	120.0	122.9
82.5°	33.9	67.7	78.4	89.0	91.9
85°	19.4	39.7	48.4	52.3	54.2
87.5°	8.7	14.5	19.4	19.4	18.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)