

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: P313462

Luminaire Tested: **24FCZ2-30-UNV-L83050-RDP-CP250-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: P313462
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-CP250-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" POLYCARB 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: 1817.0 lumens
Efficiency: N/A
Efficacy: 76.0 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

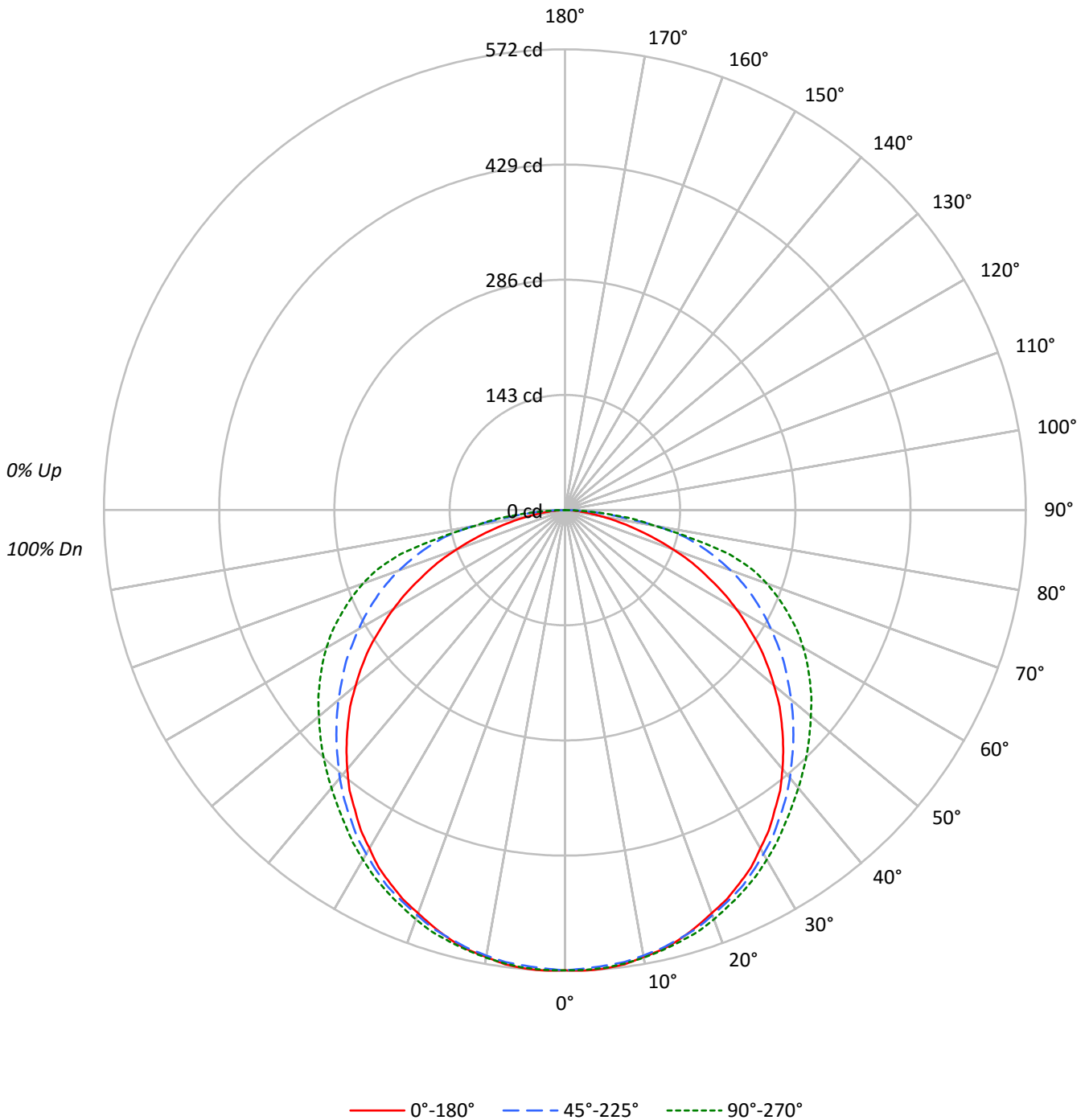
Input Watts (W): 23.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	769	769	769
5°	772	767	771
10°	770	767	771
15°	768	767	772
20°	763	766	774
25°	760	768	776
30°	753	766	779
35°	746	764	782
40°	738	763	791
45°	725	763	809
50°	709	768	834
55°	691	780	871
60°	662	795	919
65°	620	824	975
70°	564	862	1050
75°	478	909	1096
80°	377	915	887
85°	278	696	780



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	54.2	3.0
10°-20°	156.0	8.6
20°-30°	238.5	13.1
30°-40°	291.6	16.0
40°-50°	310.8	17.1
50°-60°	297.2	16.4
60°-70°	251.7	13.9
70°-80°	169.2	9.3
80°-90°	47.7	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°	448.7	24.7
0°-40°	740.4	40.7
0°-60°	1348.3	74.2
0°-90°	1817.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1817.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	571	571	571	571	571	
5°	571	570	568	570	570	54
15°	552	552	551	555	554	156
25°	512	514	517	522	523	236
35°	454	458	465	474	476	285
45°	381	388	401	418	425	294
55°	295	306	333	359	371	262
65°	195	214	259	293	306	193
75°	92	125	175	205	211	98
85°	18	37	45	49	50	22
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	571.4	571.4	571.4	571.4	571.4
2.5°	572.3	572.3	569.6	571.4	571.4
5°	571.4	570.5	567.8	570.5	570.5
7.5°	568.7	567.8	566.0	568.7	567.8
10°	563.3	563.3	561.5	564.2	564.2
12.5°	558.8	557.9	557.0	560.6	559.7
15°	551.6	551.6	550.7	555.2	554.3
17.5°	542.6	543.5	544.4	548.0	548.9
20°	532.6	534.4	535.3	540.8	540.8
22.5°	523.6	524.5	526.3	531.7	531.7
25°	511.9	513.7	517.3	521.8	522.7
27.5°	500.2	501.1	505.6	511.9	512.8
30°	484.9	487.6	493.0	500.2	501.1
32.5°	471.4	474.1	480.4	487.6	489.4
35°	454.2	457.8	465.0	474.1	475.9
37.5°	438.9	441.6	450.6	460.5	463.2
40°	420.0	425.4	434.4	446.1	450.6
42.5°	401.1	406.5	417.3	432.6	438.0
45°	381.2	387.5	401.1	418.2	425.4
47.5°	361.4	368.6	383.9	403.8	411.9
50°	338.9	347.9	366.8	389.3	398.4
52.5°	317.2	328.1	348.8	374.0	385.7
55°	294.7	305.5	332.6	358.7	371.3
57.5°	269.5	283.9	313.6	343.4	356.9
60°	246.0	259.6	295.6	328.1	341.6
62.5°	220.8	238.8	277.6	311.8	325.4
65°	194.7	214.5	258.7	292.9	306.4
67.5°	171.2	192.9	239.7	274.0	287.5
70°	143.3	170.3	219.0	253.3	266.8
72.5°	117.2	146.9	197.4	230.7	243.3
75°	91.9	125.3	174.8	204.6	210.9
77.5°	68.5	103.6	151.4	164.0	159.5
80°	48.7	82.9	118.1	111.8	114.5
82.5°	31.5	63.1	73.0	82.9	85.6
85°	18.0	37.0	45.1	48.7	50.5
87.5°	8.1	13.5	18.0	18.0	17.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)