

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: P313440

Luminaire Tested: **24FCZ2-30-UNV-L83050-RDP-CA08-W2A-U-3000K**

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: P313440
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-CA08-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" ACRYLIC SHEET
Light Source: (168) 3000K 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: 1762.0 lumens
Efficiency: N/A
Efficacy: 75.3 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

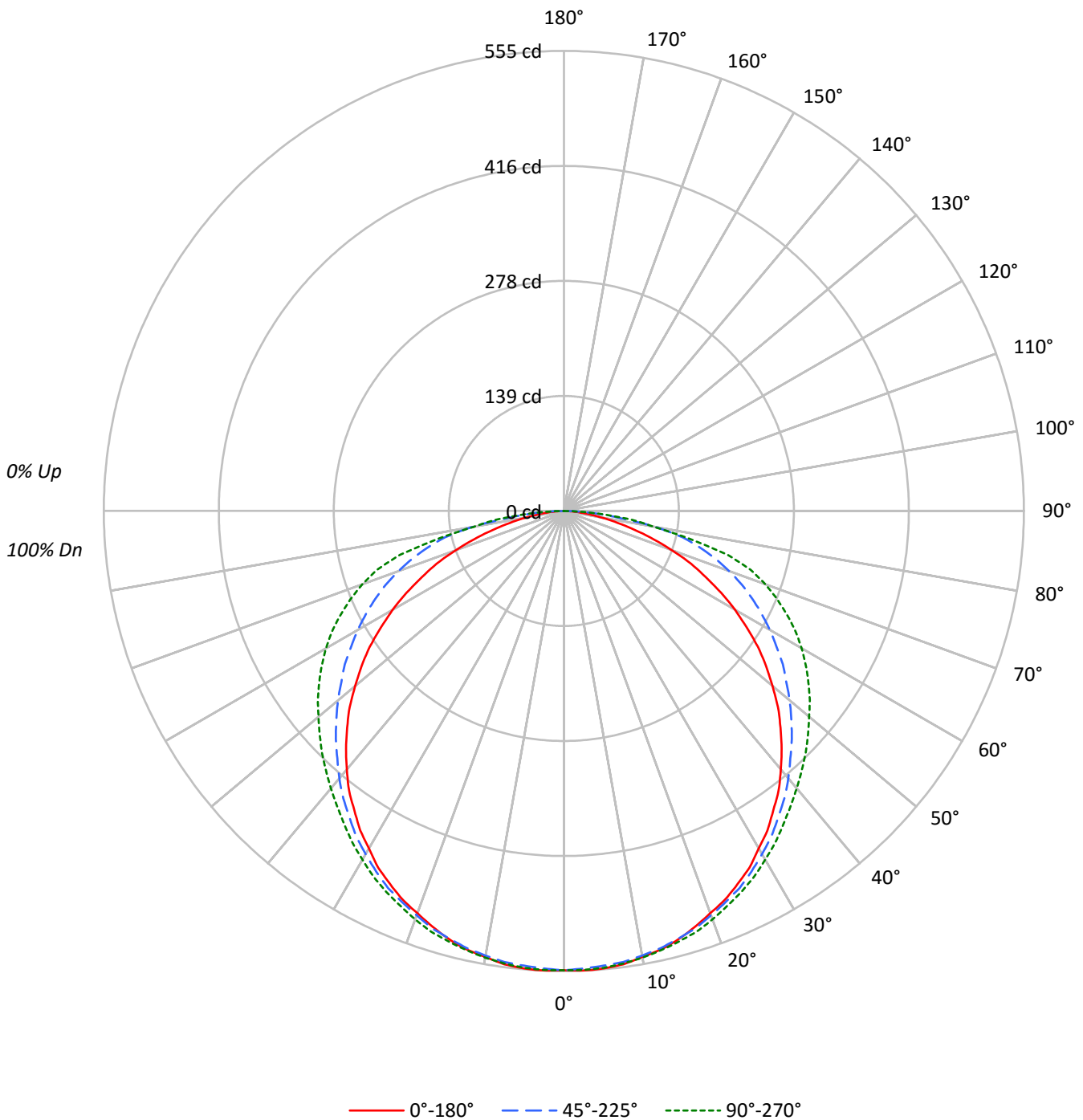
Input Watts (W): 23.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				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°	746	746	746
5°	748	744	747
10°	746	744	747
15°	745	744	749
20°	740	743	751
25°	737	745	753
30°	731	743	755
35°	724	741	758
40°	715	740	768
45°	703	740	785
50°	688	745	809
55°	670	757	845
60°	642	772	891
65°	601	798	946
70°	547	836	1018
75°	463	882	1063
80°	366	887	860
85°	270	675	755



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	52.6	3.0
10°-20°	151.3	8.6
20°-30°	231.3	13.1
30°-40°	282.8	16.0
40°-50°	301.4	17.1
50°-60°	288.2	16.4
60°-70°	244.1	13.9
70°-80°	164.1	9.3
80°-90°	46.3	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°	435.2	24.7
0°-40°	718.0	40.7
0°-60°	1307.5	74.2
0°-90°	1762.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1762.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	554	554	554	554	554	
5°	554	553	551	553	553	53
15°	535	535	534	538	538	151
25°	496	498	502	506	507	229
35°	440	444	451	460	462	276
45°	370	376	389	406	412	285
55°	286	296	322	348	360	255
65°	189	208	251	284	297	187
75°	89	122	170	198	204	95
85°	18	36	44	47	49	22
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	554.1	554.1	554.1	554.1	554.1
2.5°	555.0	555.0	552.4	554.1	554.1
5°	554.1	553.2	550.6	553.2	553.2
7.5°	551.5	550.6	548.9	551.5	550.6
10°	546.2	546.2	544.5	547.1	547.1
12.5°	541.9	541.0	540.1	543.6	542.7
15°	534.9	534.9	534.0	538.4	537.5
17.5°	526.1	527.0	527.9	531.4	532.2
20°	516.5	518.3	519.1	524.4	524.4
22.5°	507.8	508.7	510.4	515.6	515.6
25°	496.4	498.2	501.7	506.0	506.9
27.5°	485.1	485.9	490.3	496.4	497.3
30°	470.2	472.8	478.1	485.1	485.9
32.5°	457.1	459.7	465.8	472.8	474.6
35°	440.5	444.0	451.0	459.7	461.5
37.5°	425.6	428.2	437.0	446.6	449.2
40°	407.3	412.5	421.3	432.6	437.0
42.5°	388.9	394.2	404.6	419.5	424.8
45°	369.7	375.8	388.9	405.5	412.5
47.5°	350.5	357.5	372.3	391.5	399.4
50°	328.6	337.4	355.7	377.6	386.3
52.5°	307.6	318.1	338.2	362.7	374.1
55°	285.8	296.3	322.5	347.8	360.1
57.5°	261.3	275.3	304.1	333.0	346.1
60°	238.6	251.7	286.7	318.1	331.2
62.5°	214.1	231.6	269.2	302.4	315.5
65°	188.8	208.0	250.8	284.0	297.2
67.5°	166.1	187.0	232.5	265.7	278.8
70°	139.0	165.2	212.4	245.6	258.7
72.5°	113.6	142.5	191.4	223.7	236.0
75°	89.1	121.5	169.6	198.4	204.5
77.5°	66.4	100.5	146.8	159.1	154.7
80°	47.2	80.4	114.5	108.4	111.0
82.5°	30.6	61.2	70.8	80.4	83.0
85°	17.5	35.8	43.7	47.2	48.9
87.5°	7.9	13.1	17.5	17.5	16.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)