

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: P313442

Luminaire Tested: **24FCZ2-30-UNV-L83050-RDP-CA08-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: P313442
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-4000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" 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: 1958.0 lumens
Efficiency: N/A
Efficacy: 81.9 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

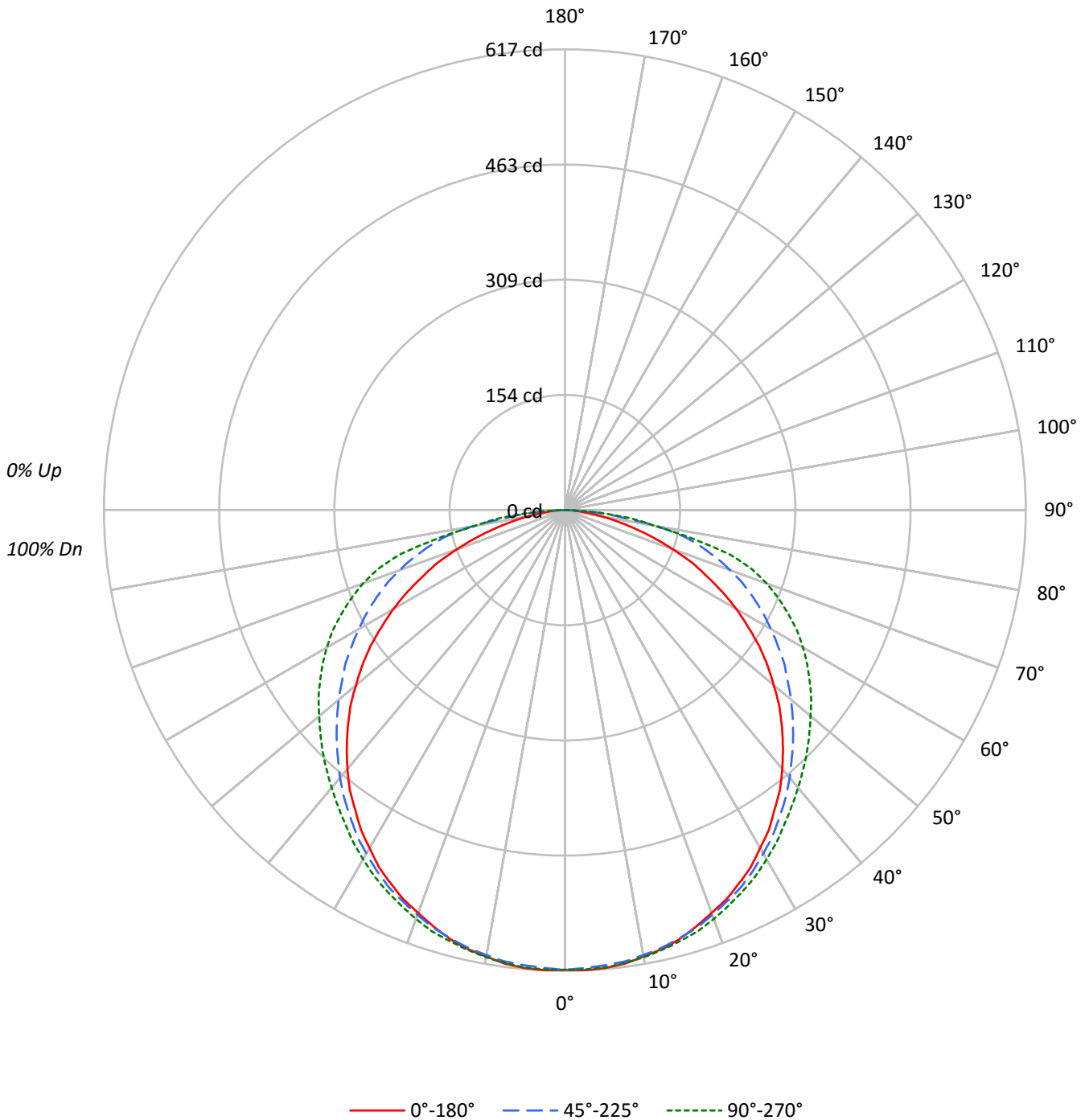
Input Watts (W): 23.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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	68	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°	828	828	828
5°	832	826	830
10°	829	827	831
15°	828	827	832
20°	822	826	834
25°	819	828	836
30°	812	825	839
35°	804	823	842
40°	795	822	853
45°	782	822	872
50°	764	827	899
55°	745	841	939
60°	713	857	991
65°	668	887	1051
70°	607	928	1131
75°	515	979	1182
80°	406	986	955
85°	299	750	840



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	58.4	3.0
10°-20°	168.1	8.6
20°-30°	257.1	13.1
30°-40°	314.2	16.0
40°-50°	334.9	17.1
50°-60°	320.2	16.4
60°-70°	271.3	13.9
70°-80°	182.3	9.3
80°-90°	51.4	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°	483.6	24.7
0°-40°	797.8	40.7
0°-60°	1453.0	74.2
0°-90°	1958.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1958.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	616	616	616	616	616	
5°	616	615	612	615	615	58
15°	594	594	593	598	597	168
25°	552	554	558	562	563	254
35°	490	493	501	511	513	307
45°	411	418	432	451	458	317
55°	318	329	358	386	400	283
65°	210	231	279	316	330	208
75°	99	135	188	220	227	106
85°	19	40	49	52	54	24
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	615.7	615.7	615.7	615.7	615.7
2.5°	616.7	616.7	613.8	615.7	615.7
5°	615.7	614.8	611.9	614.8	614.8
7.5°	612.8	611.9	609.9	612.8	611.9
10°	607.0	607.0	605.1	608.0	608.0
12.5°	602.1	601.2	600.2	604.1	603.1
15°	594.4	594.4	593.4	598.3	597.3
17.5°	584.7	585.6	586.6	590.5	591.5
20°	574.0	575.9	576.9	582.7	582.7
22.5°	564.3	565.2	567.2	573.0	573.0
25°	551.6	553.6	557.5	562.3	563.3
27.5°	539.0	540.0	544.8	551.6	552.6
30°	522.5	525.4	531.2	539.0	540.0
32.5°	507.9	510.8	517.6	525.4	527.4
35°	489.5	493.4	501.1	510.8	512.8
37.5°	473.0	475.9	485.6	496.3	499.2
40°	452.6	458.4	468.1	480.7	485.6
42.5°	432.2	438.0	449.7	466.2	472.0
45°	410.8	417.6	432.2	450.6	458.4
47.5°	389.4	397.2	413.7	435.1	443.8
50°	365.2	374.9	395.3	419.6	429.3
52.5°	341.9	353.5	375.9	403.0	415.7
55°	317.6	329.2	358.4	386.5	400.1
57.5°	290.4	305.9	338.0	370.0	384.6
60°	265.1	279.7	318.6	353.5	368.1
62.5°	237.9	257.4	299.1	336.0	350.6
65°	209.8	231.1	278.7	315.6	330.2
67.5°	184.5	207.8	258.3	295.2	309.8
70°	154.4	183.6	236.0	272.9	287.5
72.5°	126.3	158.3	212.7	248.6	262.2
75°	99.1	135.0	188.4	220.5	227.3
77.5°	73.8	111.7	163.2	176.8	171.9
80°	52.4	89.3	127.2	120.4	123.3
82.5°	34.0	68.0	78.7	89.3	92.3
85°	19.4	39.8	48.6	52.4	54.4
87.5°	8.7	14.6	19.4	19.4	18.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)