

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: P313830

Luminaire Tested: **24FCZ2-30-UNV-L83050-CP187-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: P313830
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-15)
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-CP187-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.187" POLYCARB 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: 2452.0 lumens
Efficiency: N/A
Efficacy: 104.8 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

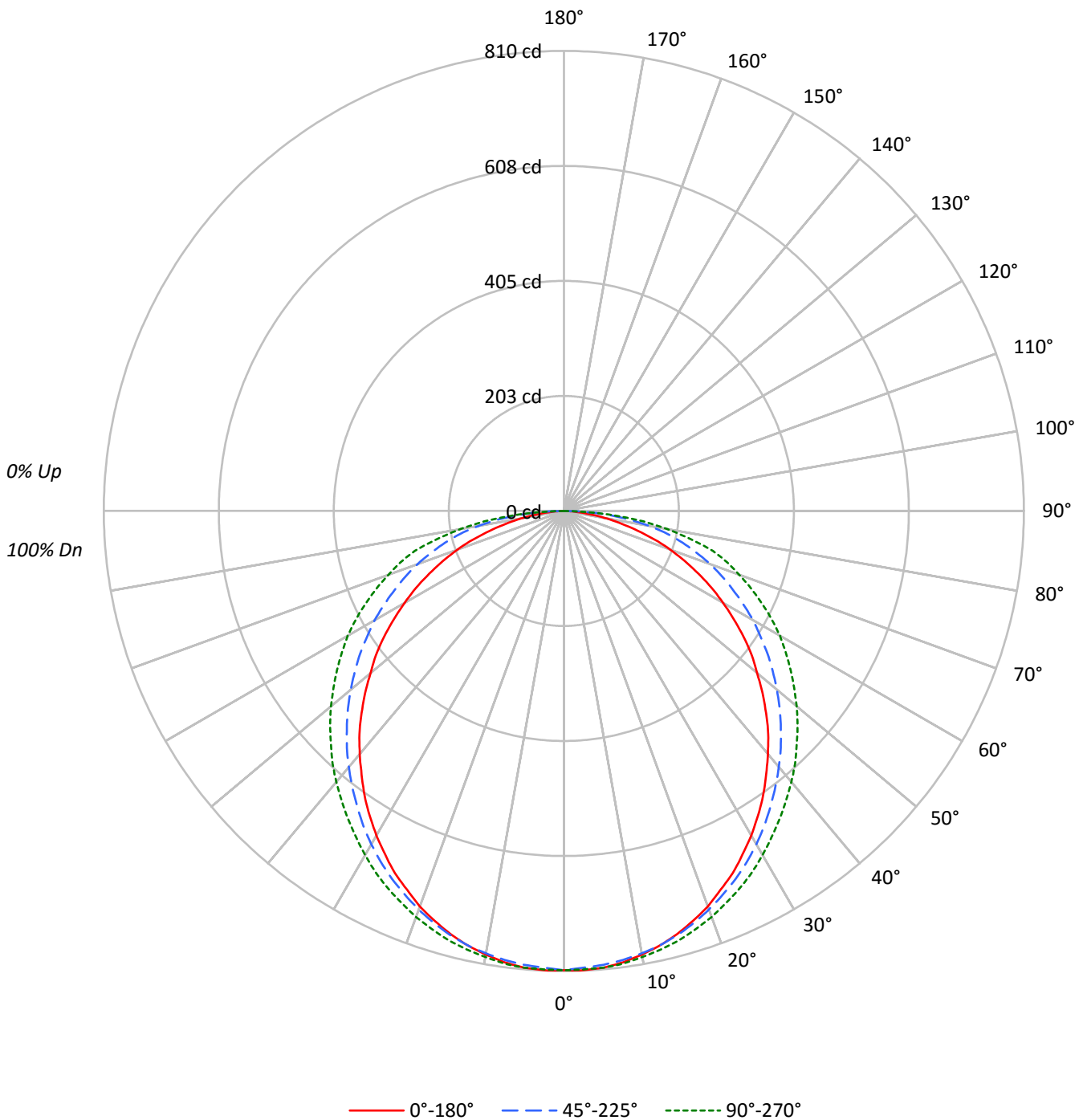
Input Watts (W): 23.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	92	89	92	89	87	88	86	84	82
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	79	67	58	52	64	57	51	62	56	50	60	54	50	47
5	74	61	52	45	72	60	51	44	58	50	44	56	49	43	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	64	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	37	31	57	45	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1088	1088	1088
5°	1090	1083	1090
10°	1084	1080	1089
15°	1074	1077	1090
20°	1061	1069	1089
25°	1045	1062	1088
30°	1025	1053	1087
35°	1005	1042	1088
40°	982	1035	1095
45°	958	1028	1104
50°	930	1025	1120
55°	906	1027	1143
60°	871	1035	1182
65°	831	1046	1225
70°	787	1079	1293
75°	702	1125	1412
80°	599	1192	1444
85°	428	1181	1382



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	76.5	3.1
10°-20°	218.8	8.9
20°-30°	330.5	13.5
30°-40°	398.4	16.2
40°-50°	418.2	17.1
50°-60°	391.2	16.0
60°-70°	323.1	13.2
70°-80°	220.2	9.0
80°-90°	75.1	3.1
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°	625.9	25.5
0°-40°	1024.2	41.8
0°-60°	1833.7	74.8
0°-90°	2452.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2452.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	809	809	809	809	809	
5°	807	806	802	807	807	77
15°	771	772	773	781	783	217
25°	704	707	715	729	733	324
35°	612	618	635	656	662	382
45°	504	514	540	570	580	388
55°	386	402	438	474	487	345
65°	261	283	329	370	385	259
75°	135	166	216	257	272	144
85°	28	54	76	86	90	35
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	808.6	808.6	808.6	808.6	808.6
2.5°	809.5	808.6	804.6	808.6	807.8
5°	807.0	806.2	802.1	807.0	807.0
7.5°	801.3	801.3	797.3	803.0	803.8
10°	793.2	793.2	790.8	797.3	797.3
12.5°	783.4	783.4	783.4	789.9	790.8
15°	771.2	772.0	772.9	781.0	782.6
17.5°	756.6	758.2	760.7	770.4	772.0
20°	741.1	742.8	746.8	758.2	760.7
22.5°	721.6	725.7	731.4	744.4	746.8
25°	703.7	707.0	715.1	728.9	733.0
27.5°	681.7	686.6	697.2	711.8	717.5
30°	659.8	664.7	677.7	694.8	699.6
32.5°	636.2	643.5	657.3	675.2	680.9
35°	611.8	618.3	634.6	655.7	662.2
37.5°	584.9	593.9	611.8	634.6	642.7
40°	558.9	568.7	589.0	613.4	623.2
42.5°	532.9	542.6	565.4	593.1	602.8
45°	503.6	514.2	540.2	569.5	580.0
47.5°	474.3	487.3	515.8	546.7	558.1
50°	444.2	458.8	489.7	522.3	535.3
52.5°	417.3	431.2	463.7	498.7	510.9
55°	386.4	401.9	437.7	473.5	487.3
57.5°	354.7	371.8	410.0	449.1	462.9
60°	323.8	342.5	384.8	423.8	439.3
62.5°	293.7	312.4	356.3	397.0	412.5
65°	261.1	283.1	328.7	370.2	384.8
67.5°	230.2	253.8	301.8	342.5	357.1
70°	200.1	222.9	274.2	314.0	328.7
72.5°	167.6	193.6	244.9	286.4	301.8
75°	135.0	166.0	216.4	257.1	271.7
77.5°	104.9	136.7	187.1	220.5	227.8
80°	77.3	109.8	153.8	177.3	186.3
82.5°	49.6	82.2	117.1	134.2	141.6
85°	27.7	54.5	76.5	86.2	89.5
87.5°	11.4	23.6	30.9	35.0	35.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)