

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: P313543

Luminaire Tested: **24FCZ2-40-UNV-L83050-RDP-CA08-W2A-U-4500K**

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: P313543
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: 24FCZ2-40-UNV-L83050-RDP-CA08-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" ACRYLIC SHEET
Light Source: (168) 4500K 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: 2639.0 lumens
Efficiency: N/A
Efficacy: 76.9 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

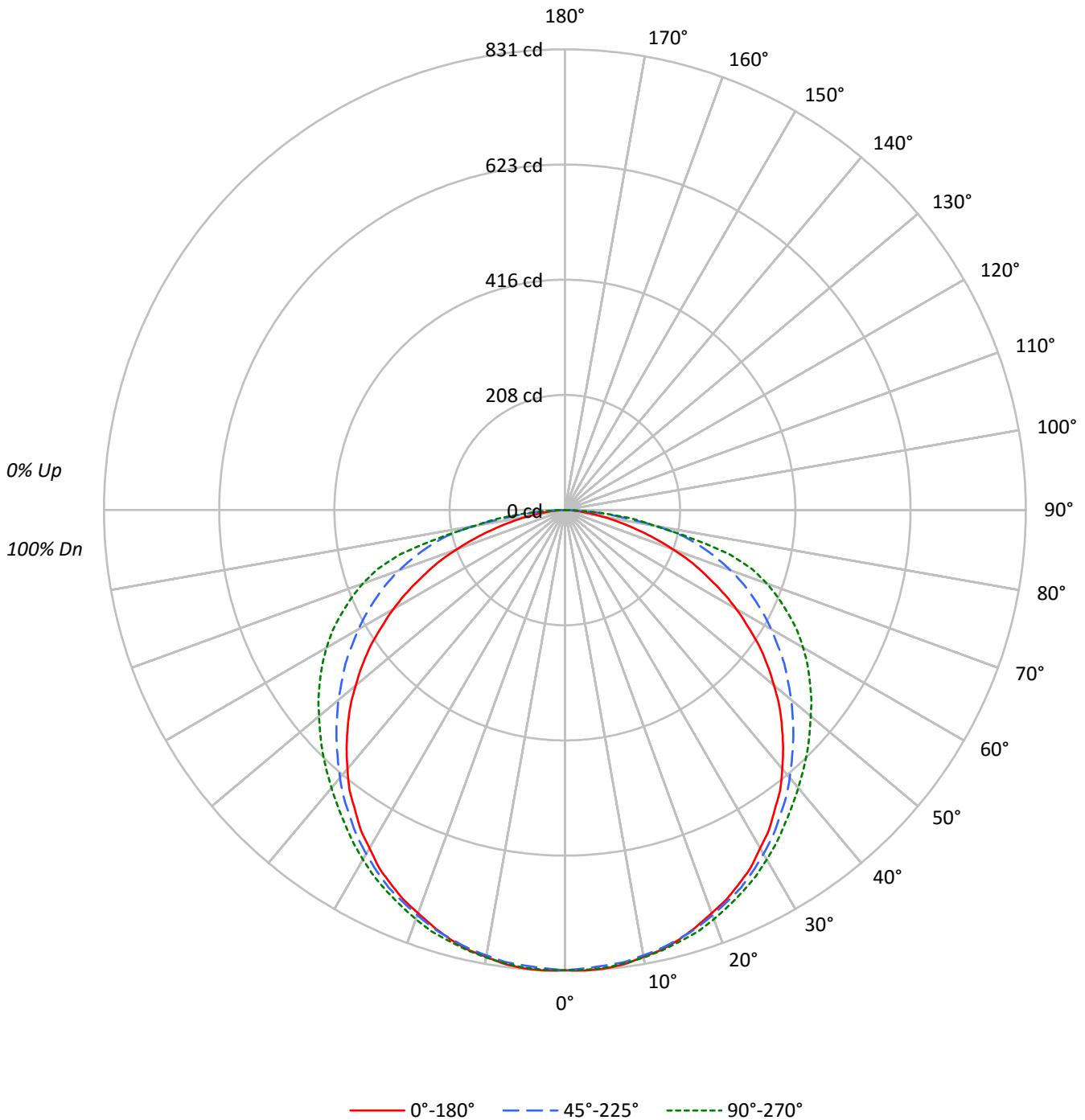
Input Watts (W): 34.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1117	1117	1117
5°	1121	1114	1119
10°	1118	1114	1120
15°	1116	1114	1121
20°	1108	1113	1125
25°	1104	1116	1127
30°	1094	1112	1131
35°	1084	1109	1135
40°	1071	1108	1150
45°	1054	1108	1176
50°	1030	1115	1211
55°	1004	1133	1265
60°	962	1155	1335
65°	900	1196	1417
70°	819	1251	1524
75°	694	1320	1592
80°	548	1329	1288
85°	404	1010	1132



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	78.7	3.0
10°-20°	226.6	8.6
20°-30°	346.5	13.1
30°-40°	423.5	16.0
40°-50°	451.4	17.1
50°-60°	431.6	16.4
60°-70°	365.6	13.9
70°-80°	245.7	9.3
80°-90°	69.3	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°	651.8	24.7
0°-40°	1075.3	40.7
0°-60°	1958.3	74.2
0°-90°	2639.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2639.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	830	830	830	830	830	
5°	830	829	825	829	829	79
15°	801	801	800	806	805	226
25°	744	746	751	758	759	343
35°	660	665	675	688	691	413
45°	554	563	582	607	618	427
55°	428	444	483	521	539	381
65°	283	312	376	425	445	281
75°	134	182	254	297	306	143
85°	26	54	65	71	73	32
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	829.9	829.9	829.9	829.9	829.9
2.5°	831.2	831.2	827.3	829.9	829.9
5°	829.9	828.6	824.7	828.6	828.6
7.5°	826.0	824.7	822.0	826.0	824.7
10°	818.1	818.1	815.5	819.4	819.4
12.5°	811.6	810.3	808.9	814.2	812.9
15°	801.1	801.1	799.8	806.3	805.0
17.5°	788.0	789.3	790.6	795.9	797.2
20°	773.6	776.2	777.5	785.4	785.4
22.5°	760.5	761.8	764.4	772.3	772.3
25°	743.5	746.1	751.4	757.9	759.2
27.5°	726.5	727.8	734.3	743.5	744.8
30°	704.2	708.2	716.0	726.5	727.8
32.5°	684.6	688.5	697.7	708.2	710.8
35°	659.7	665.0	675.4	688.5	691.1
37.5°	637.5	641.4	654.5	668.9	672.8
40°	610.0	617.8	630.9	647.9	654.5
42.5°	582.5	590.3	606.1	628.3	636.2
45°	553.7	562.9	582.5	607.4	617.8
47.5°	524.9	535.4	557.6	586.4	598.2
50°	492.2	505.3	532.8	565.5	578.6
52.5°	460.8	476.5	506.6	543.2	560.2
55°	428.0	443.7	483.0	521.0	539.3
57.5°	391.4	412.3	455.5	498.7	518.4
60°	357.4	377.0	429.3	476.5	496.1
62.5°	320.7	346.9	403.2	452.9	472.5
65°	282.7	311.5	375.7	425.4	445.1
67.5°	248.7	280.1	348.2	397.9	417.6
70°	208.1	247.4	318.1	367.8	387.5
72.5°	170.2	213.4	286.7	335.1	353.4
75°	133.5	181.9	253.9	297.1	306.3
77.5°	99.5	150.5	219.9	238.2	231.7
80°	70.7	120.4	171.5	162.3	166.2
82.5°	45.8	91.6	106.0	120.4	124.4
85°	26.2	53.7	65.4	70.7	73.3
87.5°	11.8	19.6	26.2	26.2	24.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)