

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: P313660

Luminaire Tested: **24FCZ2-50-UNV-L83050-RDP-CP250-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: P313660
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: 24FCZ2-50-UNV-L83050-RDP-CP250-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" 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: 2698.0 lumens
Efficiency: N/A
Efficacy: 63.3 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

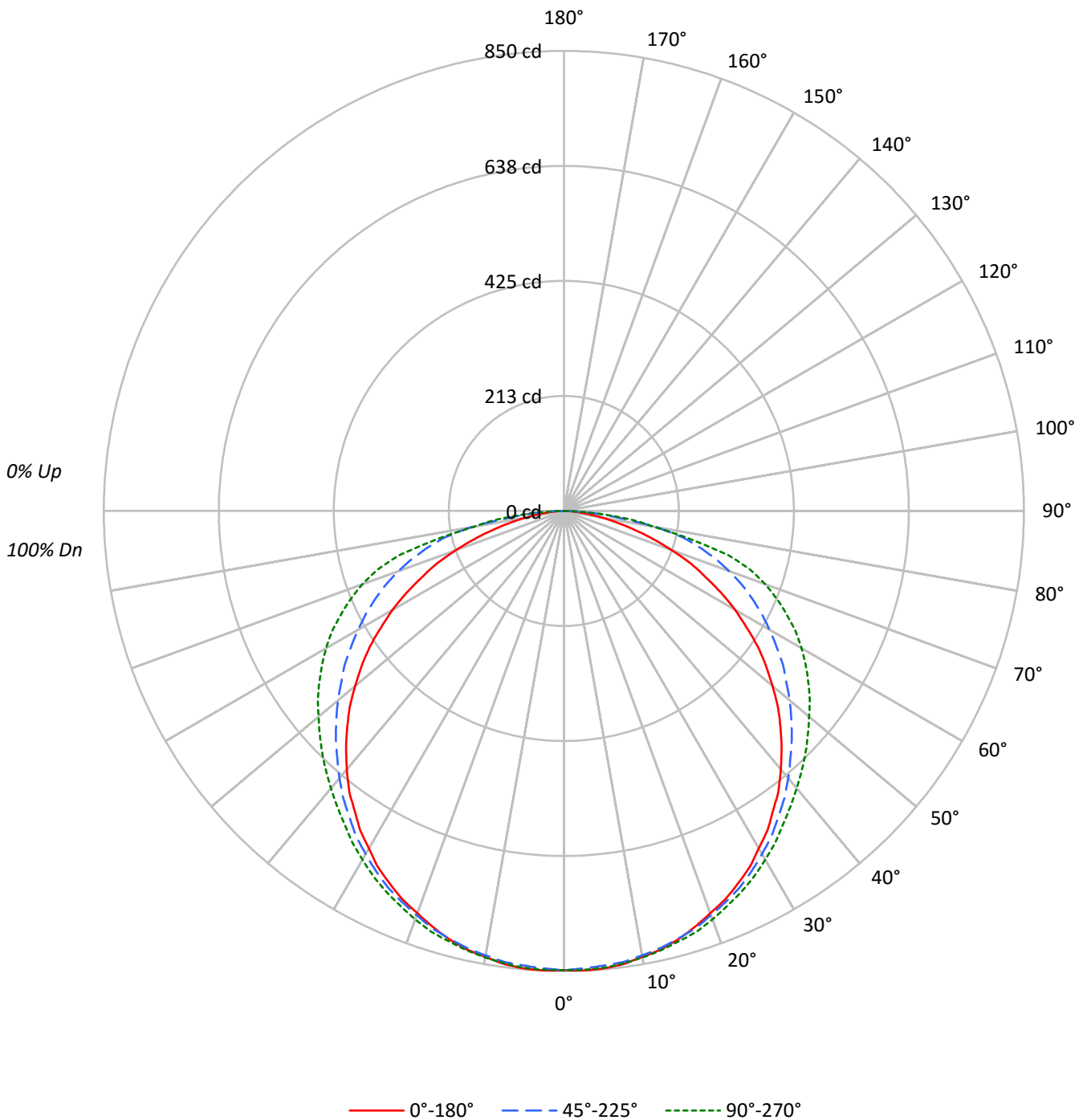
Input Watts (W): 42.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1142	1142	1142
5°	1146	1139	1144
10°	1143	1139	1145
15°	1141	1139	1146
20°	1132	1138	1150
25°	1128	1140	1152
30°	1119	1137	1156
35°	1108	1134	1161
40°	1095	1133	1175
45°	1077	1133	1202
50°	1053	1140	1238
55°	1027	1158	1293
60°	983	1181	1365
65°	920	1223	1449
70°	837	1279	1558
75°	710	1350	1628
80°	560	1358	1317
85°	414	1033	1156



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	80.5	3.0
10°-20°	231.6	8.6
20°-30°	354.2	13.1
30°-40°	433.0	16.0
40°-50°	461.5	17.1
50°-60°	441.3	16.4
60°-70°	373.8	13.9
70°-80°	251.2	9.3
80°-90°	70.9	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°	666.3	24.7
0°-40°	1099.3	40.7
0°-60°	2002.1	74.2
0°-90°	2698.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2698.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	848	848	848	848	848	
5°	848	847	843	847	847	81
15°	819	819	818	824	823	231
25°	760	763	768	775	776	350
35°	674	680	690	704	707	423
45°	566	575	596	621	632	437
55°	438	454	494	533	551	390
65°	289	318	384	435	455	287
75°	136	186	260	304	313	146
85°	27	55	67	72	75	33
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	848.4	848.4	848.4	848.4	848.4
2.5°	849.8	849.8	845.8	848.4	848.4
5°	848.4	847.1	843.1	847.1	847.1
7.5°	844.4	843.1	840.4	844.4	843.1
10°	836.4	836.4	833.7	837.7	837.7
12.5°	829.7	828.4	827.0	832.4	831.0
15°	819.0	819.0	817.7	824.4	823.0
17.5°	805.6	807.0	808.3	813.6	815.0
20°	790.9	793.6	794.9	802.9	802.9
22.5°	777.5	778.9	781.5	789.6	789.6
25°	760.1	762.8	768.1	774.8	776.2
27.5°	742.7	744.1	750.8	760.1	761.5
30°	720.0	724.0	732.0	742.7	744.1
32.5°	699.9	703.9	713.3	724.0	726.7
35°	674.5	679.8	690.5	703.9	706.6
37.5°	651.7	655.7	669.1	683.8	687.9
40°	623.6	631.6	645.0	662.4	669.1
42.5°	595.5	603.5	619.6	642.4	650.4
45°	566.1	575.4	595.5	620.9	631.6
47.5°	536.6	547.3	570.1	599.5	611.6
50°	503.2	516.6	544.7	578.1	591.5
52.5°	471.1	487.1	517.9	555.4	572.8
55°	437.6	453.7	493.8	532.6	551.4
57.5°	400.1	421.5	465.7	509.9	529.9
60°	365.3	385.4	438.9	487.1	507.2
62.5°	327.9	354.6	412.2	463.0	483.1
65°	289.1	318.5	384.1	434.9	455.0
67.5°	254.3	286.4	356.0	406.8	426.9
70°	212.8	252.9	325.2	376.0	396.1
72.5°	174.0	218.1	293.1	342.6	361.3
75°	136.5	186.0	259.6	303.8	313.1
77.5°	101.7	153.9	224.8	243.6	236.9
80°	72.3	123.1	175.3	165.9	170.0
82.5°	46.8	93.7	108.4	123.1	127.1
85°	26.8	54.9	66.9	72.3	74.9
87.5°	12.0	20.1	26.8	26.8	25.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)