

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: P310931

Luminaire Tested: **24FCZ2-50-UNV-L82765-CP250-W2A-U-2700K**

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: P310931
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: 24FCZ2-50-UNV-L82765-CP250-W2A-U-2700K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.250" POLYCARB SHEET
Light Source: (168) 2700K 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: 3895.0 lumens
Efficiency: N/A
Efficacy: 91.2 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

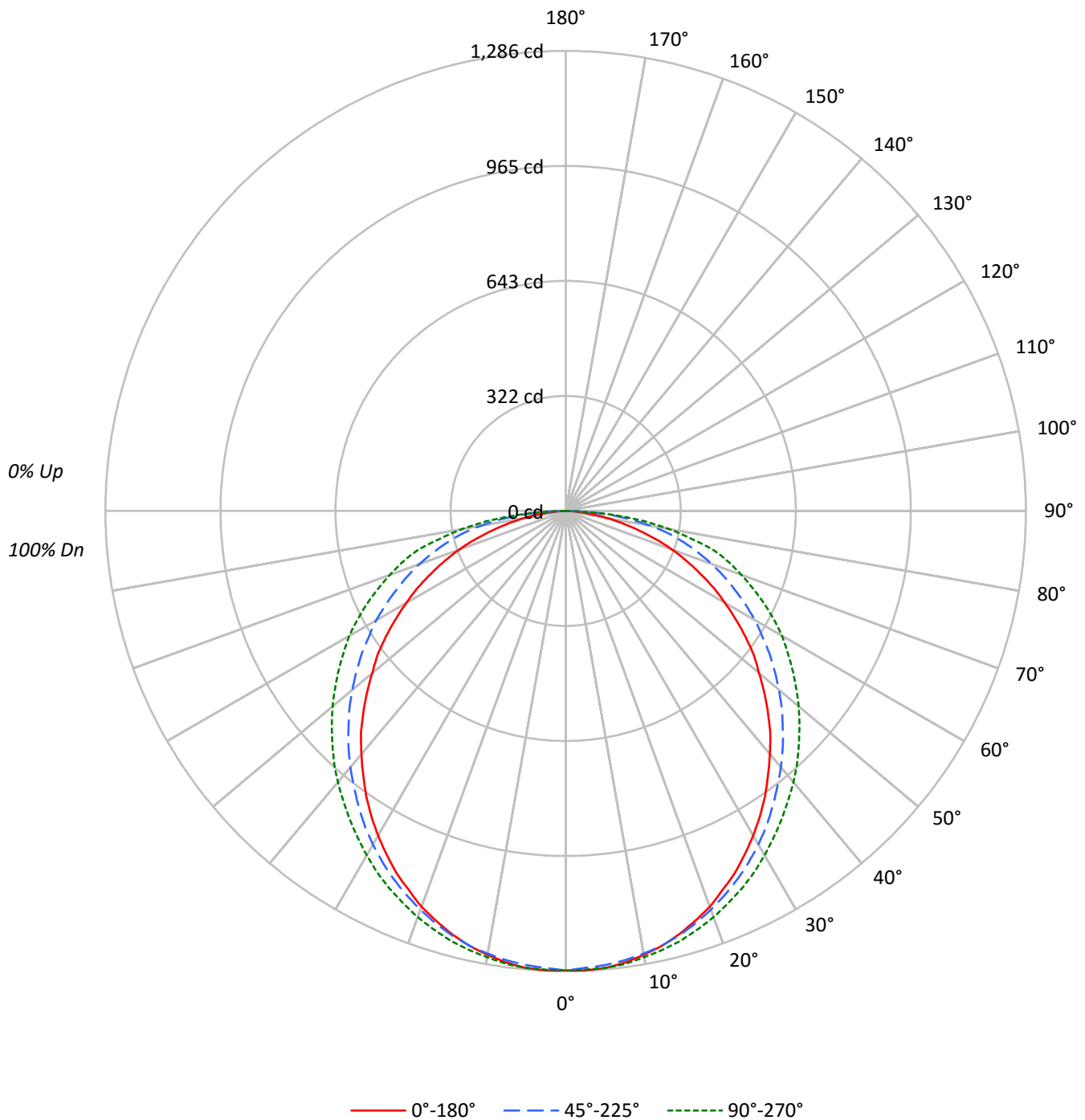
Input Watts (W): 42.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				0
RW	70	50	30	10	70	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		100
1	108	103	98	94	105	100	96	92	96	92	89		92	89	87		82
2	98	89	81	75	95	87	80	74	83	78	73		80	75	71		67
3	89	77	69	62	86	76	68	61	73	66	60		70	64	59		56
4	81	68	59	52	79	67	58	52	64	57	51		62	56	50		47
5	74	61	52	45	72	60	51	44	58	50	44		56	49	43		41
6	69	55	46	39	67	54	45	39	52	44	38		50	43	38		36
7	64	50	41	34	62	49	40	34	47	39	34		46	39	34		31
8	59	45	37	31	57	45	36	30	43	36	30		42	35	30		28
9	55	41	33	27	54	41	33	27	40	32	27		39	32	27		25
10	52	38	30	25	50	38	30	25	37	30	25		36	29	25		23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1728	1728	1728
5°	1732	1721	1732
10°	1721	1716	1730
15°	1707	1710	1732
20°	1686	1699	1730
25°	1659	1686	1729
30°	1628	1672	1727
35°	1596	1656	1728
40°	1559	1643	1739
45°	1522	1633	1753
50°	1477	1629	1780
55°	1440	1631	1816
60°	1384	1645	1878
65°	1321	1662	1946
70°	1251	1713	2054
75°	1115	1787	2244
80°	951	1892	2293
85°	678	1876	2195



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	121.6	3.1
10°-20°	347.6	8.9
20°-30°	525.0	13.5
30°-40°	632.8	16.2
40°-50°	664.3	17.1
50°-60°	621.5	16.0
60°-70°	513.2	13.2
70°-80°	349.7	9.0
80°-90°	119.3	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°	994.2	25.5
0°-40°	1627.0	41.8
0°-60°	2912.8	74.8
0°-90°	3895.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3895.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1284	1284	1284	1284	1284	
5°	1282	1281	1274	1282	1282	122
15°	1225	1226	1228	1241	1243	345
25°	1118	1123	1136	1158	1164	514
35°	972	982	1008	1042	1052	607
45°	800	817	858	905	921	617
55°	614	638	695	752	774	548
65°	415	450	522	588	611	411
75°	214	264	344	408	432	229
85°	44	87	122	137	142	55
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1284.5	1284.5	1284.5	1284.5	1284.5
2.5°	1285.8	1284.5	1278.1	1284.5	1283.2
5°	1282.0	1280.7	1274.2	1282.0	1282.0
7.5°	1272.9	1272.9	1266.4	1275.5	1276.8
10°	1260.0	1260.0	1256.1	1266.4	1266.4
12.5°	1244.5	1244.5	1244.5	1254.8	1256.1
15°	1225.1	1226.4	1227.7	1240.6	1243.2
17.5°	1201.8	1204.4	1208.3	1223.8	1226.4
20°	1177.3	1179.9	1186.3	1204.4	1208.3
22.5°	1146.3	1152.7	1161.8	1182.4	1186.3
25°	1117.8	1123.0	1135.9	1157.9	1164.4
27.5°	1082.9	1090.7	1107.5	1130.8	1139.8
30°	1048.0	1055.8	1076.5	1103.6	1111.4
32.5°	1010.6	1022.2	1044.2	1072.6	1081.6
35°	971.8	982.1	1008.0	1041.6	1051.9
37.5°	929.2	943.4	971.8	1008.0	1020.9
40°	887.8	903.3	935.6	974.4	989.9
42.5°	846.5	862.0	898.1	942.1	957.6
45°	799.9	816.7	858.1	904.6	921.4
47.5°	753.4	774.1	819.3	868.4	886.5
50°	705.6	728.9	778.0	829.7	850.3
52.5°	662.9	684.9	736.6	792.2	811.6
55°	613.8	638.4	695.3	752.1	774.1
57.5°	563.4	590.6	651.3	713.3	735.3
60°	514.3	544.1	611.3	673.3	697.8
62.5°	466.5	496.2	566.0	630.6	655.2
65°	414.8	449.7	522.1	588.0	611.3
67.5°	365.7	403.2	479.4	544.1	567.3
70°	317.9	354.1	435.5	498.8	522.1
72.5°	266.2	307.6	389.0	454.9	479.4
75°	214.5	263.6	343.7	408.4	431.6
77.5°	166.7	217.1	297.2	350.2	361.8
80°	122.8	174.5	244.2	281.7	295.9
82.5°	78.8	130.5	186.1	213.2	224.9
85°	43.9	86.6	121.5	137.0	142.2
87.5°	18.1	37.5	49.1	55.6	55.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)