

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: P310824

Luminaire Tested: **24FCZ2-45-UNV-L82765-CP125-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: P310824
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: 24FCZ2-45-UNV-L82765-CP125-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" 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: 3822.0 lumens
Efficiency: N/A
Efficacy: 102.5 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

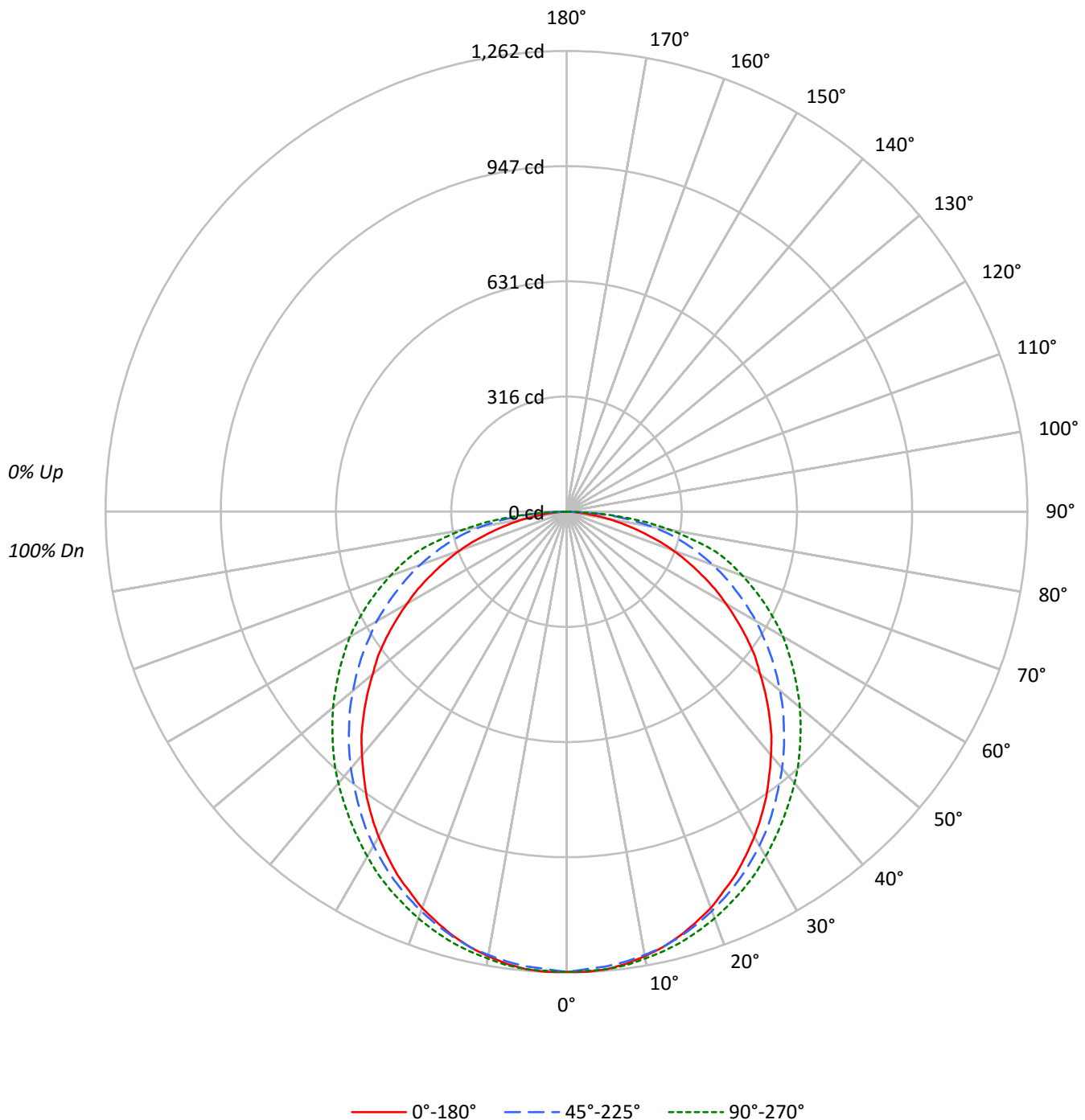
Input Watts (W): 37.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1696	1696	1696
5°	1699	1689	1699
10°	1689	1684	1698
15°	1674	1678	1699
20°	1654	1667	1698
25°	1628	1655	1696
30°	1598	1641	1694
35°	1566	1625	1695
40°	1530	1613	1706
45°	1494	1602	1720
50°	1449	1598	1747
55°	1413	1600	1782
60°	1358	1614	1843
65°	1296	1631	1910
70°	1227	1681	2015
75°	1094	1753	2202
80°	934	1857	2250
85°	665	1840	2154



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	119.3	3.1
10°-20°	341.1	8.9
20°-30°	515.2	13.5
30°-40°	620.9	16.2
40°-50°	651.8	17.1
50°-60°	609.8	16.0
60°-70°	503.6	13.2
70°-80°	343.2	9.0
80°-90°	117.0	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°	975.6	25.5
0°-40°	1596.5	41.8
0°-60°	2858.2	74.8
0°-90°	3822.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3822.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1260	1260	1260	1260	1260	
5°	1258	1257	1250	1258	1258	119
15°	1202	1203	1205	1217	1220	339
25°	1097	1102	1115	1136	1142	505
35°	954	964	989	1022	1032	596
45°	785	801	842	888	904	605
55°	602	626	682	738	760	538
65°	407	441	512	577	600	404
75°	210	259	337	401	424	224
85°	43	85	119	134	140	54
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1260.5	1260.5	1260.5	1260.5	1260.5
2.5°	1261.7	1260.5	1254.1	1260.5	1259.2
5°	1257.9	1256.7	1250.3	1257.9	1257.9
7.5°	1249.0	1249.0	1242.7	1251.6	1252.9
10°	1236.4	1236.4	1232.6	1242.7	1242.7
12.5°	1221.2	1221.2	1221.2	1231.3	1232.6
15°	1202.1	1203.4	1204.7	1217.3	1219.9
17.5°	1179.3	1181.8	1185.6	1200.9	1203.4
20°	1155.2	1157.7	1164.1	1181.8	1185.6
22.5°	1124.8	1131.1	1140.0	1160.3	1164.1
25°	1096.9	1102.0	1114.6	1136.2	1142.5
27.5°	1062.6	1070.3	1086.7	1109.6	1118.4
30°	1028.4	1036.0	1056.3	1082.9	1090.5
32.5°	991.6	1003.0	1024.6	1052.5	1061.4
35°	953.6	963.7	989.1	1022.1	1032.2
37.5°	911.7	925.7	953.6	989.1	1001.8
40°	871.2	886.4	918.1	956.1	971.3
42.5°	830.6	845.8	881.3	924.4	939.6
45°	784.9	801.4	842.0	887.6	904.1
47.5°	739.3	759.6	804.0	852.1	869.9
50°	692.4	715.2	763.4	814.1	834.4
52.5°	650.5	672.1	722.8	777.3	796.3
55°	602.3	626.4	682.2	738.0	759.6
57.5°	552.9	579.5	639.1	700.0	721.5
60°	504.7	533.9	599.8	660.7	684.8
62.5°	457.8	486.9	555.4	618.8	642.9
65°	407.1	441.3	512.3	577.0	599.8
67.5°	358.9	395.6	470.5	533.9	556.7
70°	311.9	347.5	427.3	489.5	512.3
72.5°	261.2	301.8	381.7	446.4	470.5
75°	210.5	258.7	337.3	400.7	423.5
77.5°	163.6	213.0	291.7	343.6	355.1
80°	120.5	171.2	239.7	276.4	290.4
82.5°	77.4	128.1	182.6	209.2	220.6
85°	43.1	85.0	119.2	134.4	139.5
87.5°	17.8	36.8	48.2	54.5	54.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)