

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: P310817

Luminaire Tested: **24FCZ2-45-UNV-L82765-CA125-W2A-U-4000K**

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: P310817
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-CA125-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" ACRYLIC SHEET
Light Source: (168) 4000K 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: 4121.0 lumens
Efficiency: N/A
Efficacy: 108.4 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

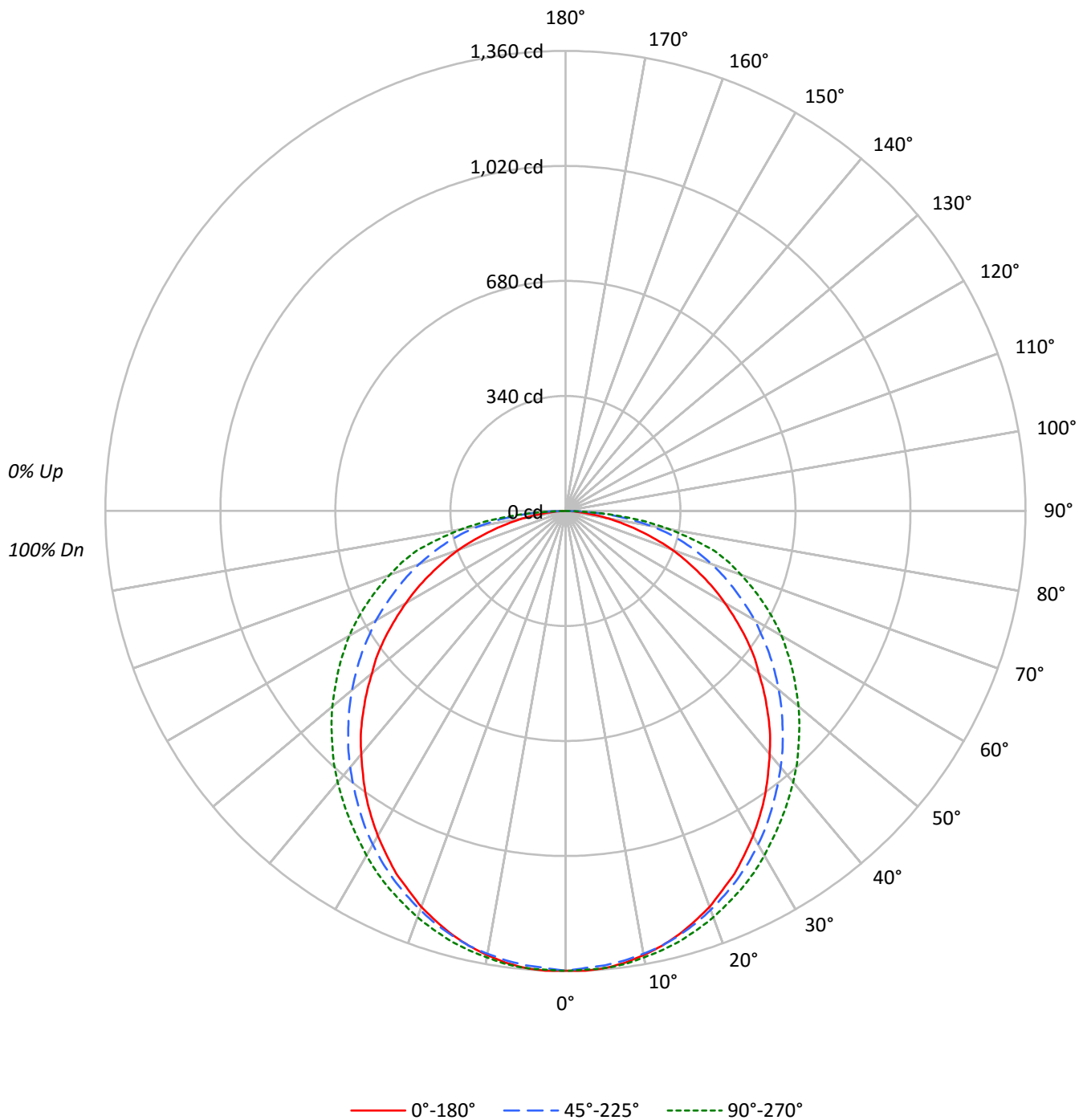
Input Watts (W): 38
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1829	1829	1829
5°	1832	1821	1832
10°	1821	1816	1831
15°	1806	1809	1832
20°	1783	1797	1830
25°	1756	1784	1829
30°	1723	1769	1827
35°	1689	1752	1828
40°	1650	1739	1839
45°	1610	1728	1855
50°	1563	1723	1883
55°	1524	1726	1921
60°	1464	1740	1987
65°	1397	1759	2059
70°	1323	1813	2173
75°	1180	1891	2374
80°	1007	2002	2426
85°	718	1984	2322



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	128.6	3.1
10°-20°	367.8	8.9
20°-30°	555.5	13.5
30°-40°	669.5	16.2
40°-50°	702.8	17.1
50°-60°	657.5	16.0
60°-70°	543.0	13.2
70°-80°	370.0	9.0
80°-90°	126.2	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°	1051.9	25.5
0°-40°	1721.4	41.8
0°-60°	3081.8	74.8
0°-90°	4121.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4121.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1359	1359	1359	1359	1359	
5°	1356	1355	1348	1356	1356	129
15°	1296	1298	1299	1313	1315	365
25°	1183	1188	1202	1225	1232	544
35°	1028	1039	1066	1102	1113	643
45°	846	864	908	957	975	653
55°	650	675	736	796	819	580
65°	439	476	552	622	647	435
75°	227	279	364	432	457	242
85°	46	92	128	145	150	58
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1359.1	1359.1	1359.1	1359.1	1359.1
2.5°	1360.4	1359.1	1352.2	1359.1	1357.7
5°	1356.3	1355.0	1348.1	1356.3	1356.3
7.5°	1346.8	1346.8	1339.9	1349.5	1350.9
10°	1333.1	1333.1	1329.0	1339.9	1339.9
12.5°	1316.7	1316.7	1316.7	1327.6	1329.0
15°	1296.2	1297.5	1298.9	1312.6	1315.3
17.5°	1271.6	1274.3	1278.4	1294.8	1297.5
20°	1245.6	1248.3	1255.2	1274.3	1278.4
22.5°	1212.8	1219.6	1229.2	1251.1	1255.2
25°	1182.7	1188.2	1201.8	1225.1	1231.9
27.5°	1145.8	1154.0	1171.8	1196.4	1205.9
30°	1108.9	1117.1	1138.9	1167.7	1175.9
32.5°	1069.2	1081.5	1104.8	1134.8	1144.4
35°	1028.2	1039.1	1066.5	1102.0	1113.0
37.5°	983.1	998.1	1028.2	1066.5	1080.1
40°	939.3	955.7	989.9	1030.9	1047.3
42.5°	895.6	912.0	950.3	996.7	1013.1
45°	846.3	864.1	907.9	957.1	974.9
47.5°	797.1	819.0	866.9	918.8	937.9
50°	746.5	771.1	823.1	877.8	899.7
52.5°	701.4	724.7	779.3	838.1	858.6
55°	649.5	675.4	735.6	795.8	819.0
57.5°	596.1	624.8	689.1	754.7	778.0
60°	544.2	575.6	646.7	712.3	738.3
62.5°	493.6	525.0	598.9	667.2	693.2
65°	438.9	475.8	552.4	622.1	646.7
67.5°	386.9	426.6	507.3	575.6	600.2
70°	336.3	374.6	460.8	527.8	552.4
72.5°	281.7	325.4	411.5	481.3	507.3
75°	227.0	278.9	363.7	432.1	456.7
77.5°	176.4	229.7	314.5	370.5	382.8
80°	129.9	184.6	258.4	298.1	313.1
82.5°	83.4	138.1	196.9	225.6	237.9
85°	46.5	91.6	128.5	144.9	150.4
87.5°	19.1	39.7	52.0	58.8	58.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)