

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: P310905

Luminaire Tested: **24FCZ2-50-UNV-L82765-CA125-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: P310905  
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-CA125-W2A-U-3000K  
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" ACRYLIC 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

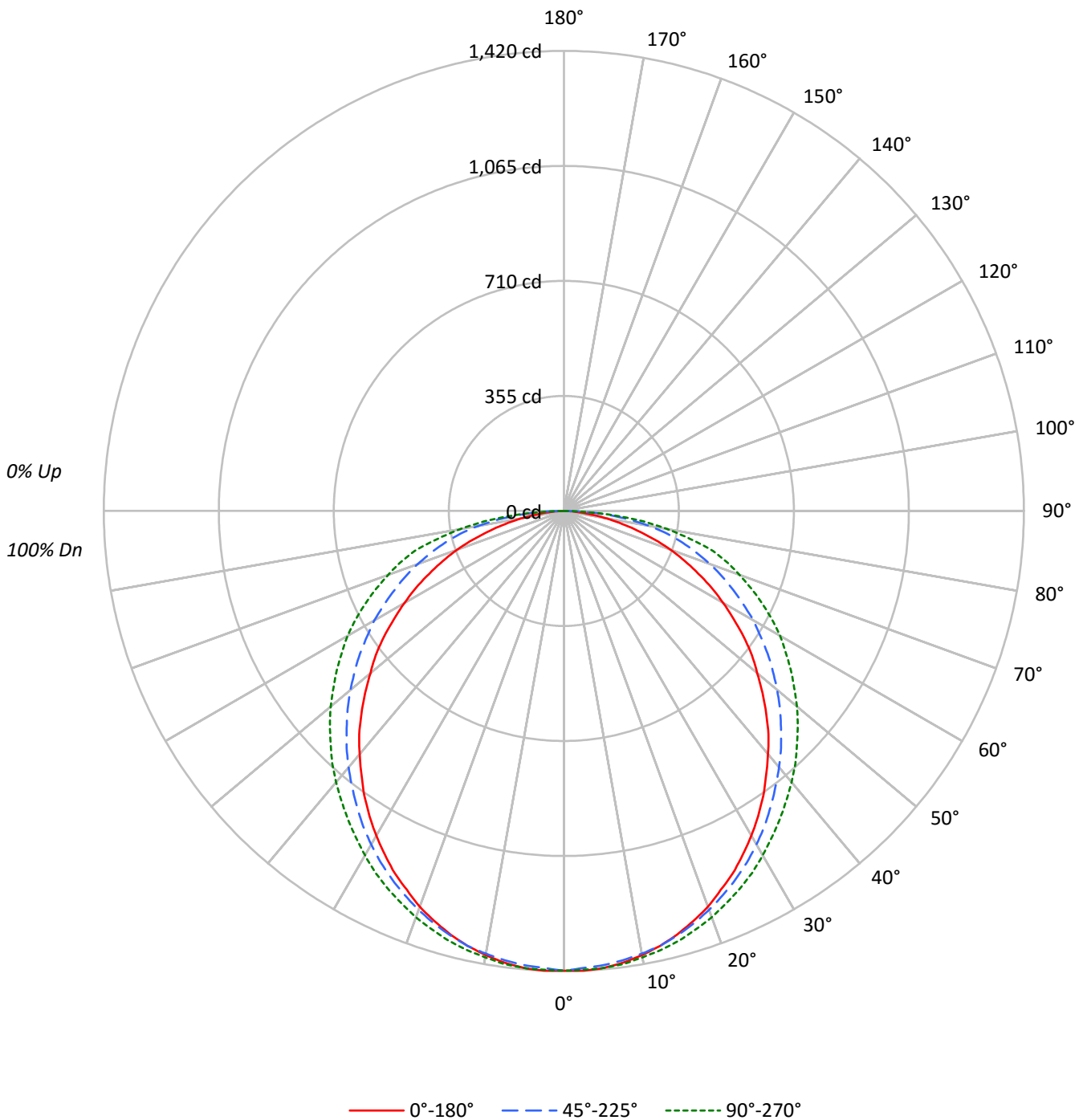
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4302.0 lumens  
Efficiency: N/A  
Efficacy: 101.5 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): 42.4  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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	92	89	92	89	87	88	86	84	82
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	79	67	58	52	64	57	51	62	56	50	60	54	50	47
5	74	61	52	45	72	60	51	44	58	50	44	56	49	43	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	64	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	37	31	57	45	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	1909	1909	1909
5°	1912	1901	1912
10°	1901	1896	1911
15°	1885	1889	1913
20°	1862	1876	1911
25°	1833	1863	1909
30°	1798	1847	1907
35°	1763	1829	1908
40°	1722	1815	1920
45°	1681	1803	1936
50°	1631	1799	1966
55°	1590	1801	2006
60°	1529	1817	2074
65°	1459	1836	2149
70°	1381	1892	2268
75°	1232	1974	2478
80°	1051	2091	2533
85°	749	2072	2424



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	134.3	3.1
10°-20°	383.9	8.9
20°-30°	579.9	13.5
30°-40°	698.9	16.2
40°-50°	733.7	17.1
50°-60°	686.4	16.0
60°-70°	566.9	13.2
70°-80°	386.3	9.0
80°-90°	131.7	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°	1098.1	25.5
0°-40°	1797.0	41.8
0°-60°	3217.1	74.8
0°-90°	4302.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4302.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1419	1419	1419	1419	1419	
5°	1416	1414	1407	1416	1416	134
15°	1353	1354	1356	1370	1373	381
25°	1235	1240	1255	1279	1286	568
35°	1073	1085	1113	1150	1162	671
45°	884	902	948	999	1018	681
55°	678	705	768	831	855	605
65°	458	497	577	649	675	454
75°	237	291	380	451	477	253
85°	48	96	134	151	157	61
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1418.8	1418.8	1418.8	1418.8	1418.8
2.5°	1420.2	1418.8	1411.6	1418.8	1417.3
5°	1415.9	1414.5	1407.3	1415.9	1415.9
7.5°	1405.9	1405.9	1398.8	1408.8	1410.2
10°	1391.6	1391.6	1387.4	1398.8	1398.8
12.5°	1374.5	1374.5	1374.5	1385.9	1387.4
15°	1353.1	1354.5	1356.0	1370.2	1373.1
17.5°	1327.4	1330.3	1334.5	1351.7	1354.5
20°	1300.3	1303.1	1310.3	1330.3	1334.5
22.5°	1266.0	1273.2	1283.2	1306.0	1310.3
25°	1234.6	1240.3	1254.6	1278.9	1286.0
27.5°	1196.1	1204.7	1223.2	1248.9	1258.9
30°	1157.6	1166.1	1189.0	1218.9	1227.5
32.5°	1116.2	1129.0	1153.3	1184.7	1194.7
35°	1073.3	1084.8	1113.3	1150.4	1161.8
37.5°	1026.2	1041.9	1073.3	1113.3	1127.6
40°	980.6	997.7	1033.4	1076.2	1093.3
42.5°	934.9	952.0	992.0	1040.5	1057.6
45°	883.5	902.1	947.7	999.1	1017.7
47.5°	832.1	855.0	904.9	959.2	979.1
50°	779.3	805.0	859.3	916.3	939.2
52.5°	732.2	756.5	813.6	875.0	896.4
55°	678.0	705.1	767.9	830.7	855.0
57.5°	622.3	652.3	719.4	787.9	812.1
60°	568.1	600.9	675.1	743.6	770.8
62.5°	515.3	548.1	625.2	696.5	723.7
65°	458.2	496.7	576.6	649.4	675.1
67.5°	403.9	445.3	529.5	600.9	626.6
70°	351.1	391.1	481.0	550.9	576.6
72.5°	294.0	339.7	429.6	502.4	529.5
75°	236.9	291.2	379.7	451.0	476.7
77.5°	184.1	239.8	328.3	386.8	399.7
80°	135.6	192.7	269.8	311.2	326.9
82.5°	87.1	144.2	205.5	235.5	248.4
85°	48.5	95.6	134.2	151.3	157.0
87.5°	20.0	41.4	54.2	61.4	61.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)