

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: P310729

Luminaire Tested: **24FCZ2-40-UNV-L82765-CA125-W2A-U-5000K**

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: P310729  
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: 24FCZ2-40-UNV-L82765-CA125-W2A-U-5000K  
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" ACRYLIC SHEET  
Light Source: (168) 5000K 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**

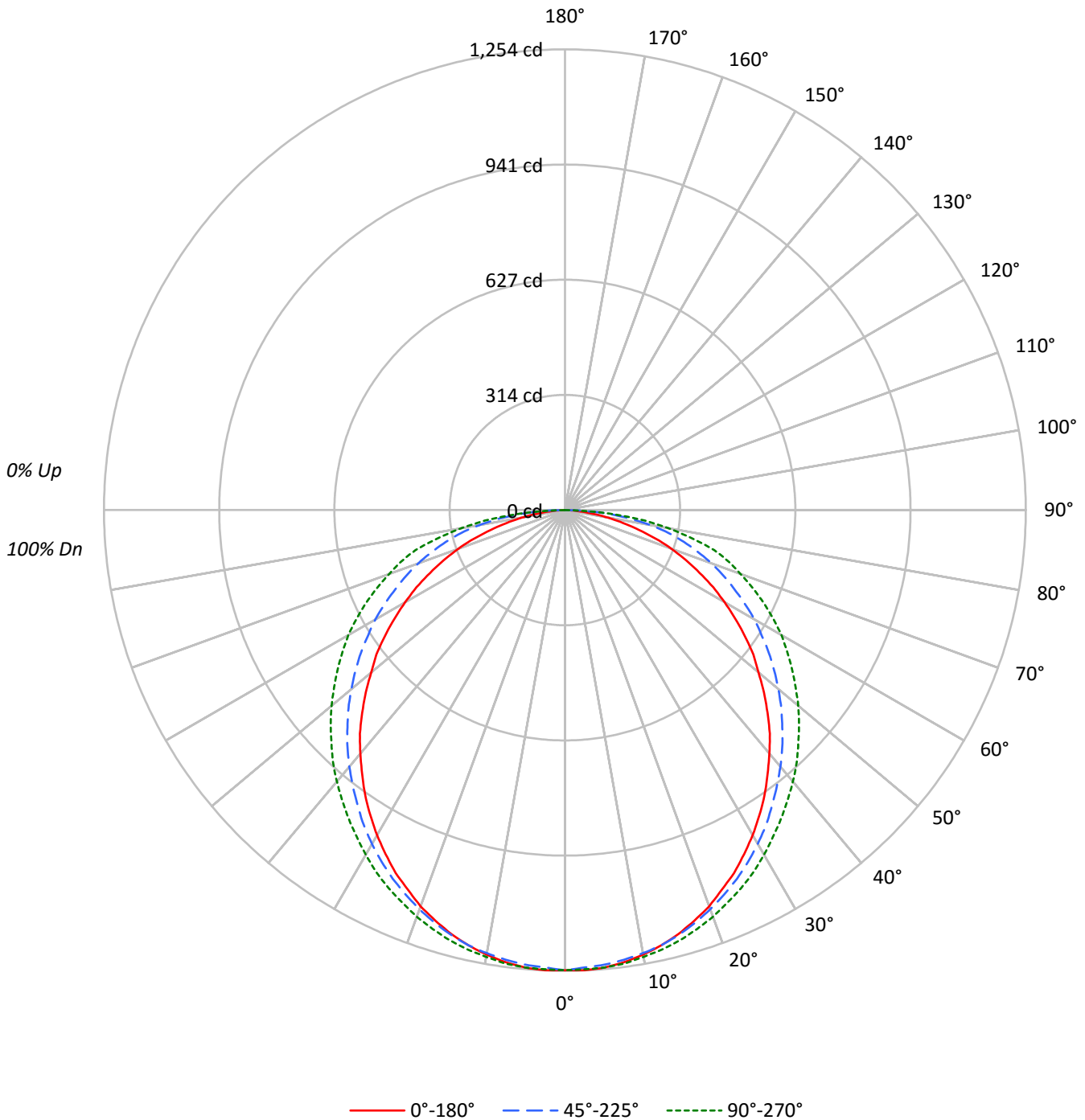
Lumens per Lamp: N/A  
Luminaire Lumens: 3797.0 lumens  
Efficiency: N/A  
Efficacy: 113.3 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 33.5  
Input Voltage (V): NR  
Input Current (A<sub>in</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°	1685	1685	1685
5°	1688	1678	1688
10°	1678	1673	1687
15°	1664	1667	1688
20°	1643	1656	1687
25°	1618	1644	1685
30°	1587	1630	1683
35°	1556	1614	1684
40°	1520	1602	1695
45°	1484	1592	1709
50°	1440	1587	1735
55°	1404	1590	1770
60°	1349	1604	1831
65°	1287	1620	1897
70°	1219	1670	2002
75°	1087	1742	2188
80°	927	1845	2235
85°	661	1828	2140



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	118.5	3.1
10°-20°	338.9	8.9
20°-30°	511.8	13.5
30°-40°	616.9	16.2
40°-50°	647.6	17.1
50°-60°	605.9	16.0
60°-70°	500.3	13.2
70°-80°	340.9	9.0
80°-90°	116.3	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°	969.2	25.5
0°-40°	1586.0	41.8
0°-60°	2839.5	74.8
0°-90°	3797.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3797.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1252	1252	1252	1252	1252	
5°	1250	1248	1242	1250	1250	119
15°	1194	1196	1197	1209	1212	337
25°	1090	1095	1107	1129	1135	501
35°	947	957	983	1015	1026	592
45°	780	796	836	882	898	601
55°	598	622	678	733	755	534
65°	404	438	509	573	596	401
75°	209	257	335	398	421	223
85°	43	84	118	134	139	54
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1252.2	1252.2	1252.2	1252.2	1252.2
2.5°	1253.5	1252.2	1245.9	1252.2	1251.0
5°	1249.7	1248.4	1242.1	1249.7	1249.7
7.5°	1240.9	1240.9	1234.6	1243.4	1244.7
10°	1228.3	1228.3	1224.5	1234.6	1234.6
12.5°	1213.2	1213.2	1213.2	1223.2	1224.5
15°	1194.3	1195.5	1196.8	1209.4	1211.9
17.5°	1171.6	1174.1	1177.9	1193.0	1195.5
20°	1147.7	1150.2	1156.5	1174.1	1177.9
22.5°	1117.4	1123.7	1132.5	1152.7	1156.5
25°	1089.7	1094.7	1107.3	1128.8	1135.1
27.5°	1055.7	1063.3	1079.6	1102.3	1111.1
30°	1021.7	1029.2	1049.4	1075.8	1083.4
32.5°	985.1	996.5	1017.9	1045.6	1054.4
35°	947.4	957.4	982.6	1015.4	1025.5
37.5°	905.8	919.6	947.4	982.6	995.2
40°	865.5	880.6	912.1	949.9	965.0
42.5°	825.2	840.3	875.5	918.4	933.5
45°	779.8	796.2	836.5	881.8	898.2
47.5°	734.4	754.6	798.7	846.6	864.2
50°	687.8	710.5	758.4	808.8	828.9
52.5°	646.3	667.7	718.1	772.2	791.1
55°	598.4	622.3	677.8	733.2	754.6
57.5°	549.3	575.7	634.9	695.4	716.8
60°	501.4	530.4	595.9	656.3	680.3
62.5°	454.8	483.8	551.8	614.8	638.7
65°	404.4	438.4	508.9	573.2	595.9
67.5°	356.5	393.1	467.4	530.4	553.0
70°	309.9	345.2	424.5	486.3	508.9
72.5°	259.5	299.8	379.2	443.4	467.4
75°	209.1	257.0	335.1	398.1	420.8
77.5°	162.5	211.6	289.7	341.4	352.7
80°	119.7	170.1	238.1	274.6	288.5
82.5°	76.8	127.2	181.4	207.9	219.2
85°	42.8	84.4	118.4	133.5	138.6
87.5°	17.6	36.5	47.9	54.2	54.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)