

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: P310825

Luminaire Tested: **24FCZ2-45-UNV-L82765-CP125-W2A-U-3500K**

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: P310825  
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-3500K  
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" POLYCARB SHEET  
Light Source: (168) 3500K 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**

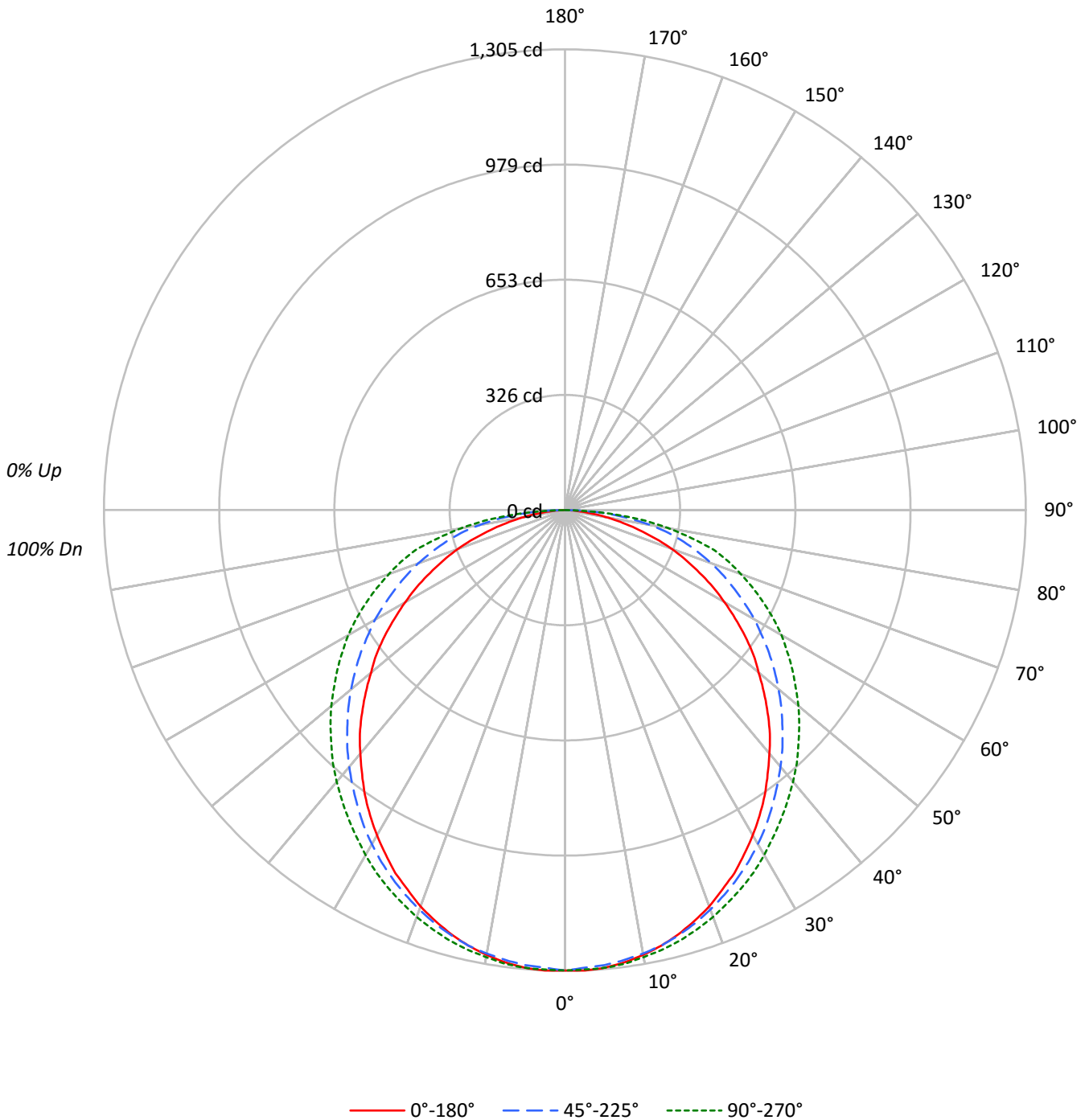
Lumens per Lamp: N/A  
Luminaire Lumens: 3954.0 lumens  
Efficiency: N/A  
Efficacy: 104.6 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 37.8  
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°	1755	1755	1755
5°	1758	1747	1758
10°	1748	1742	1756
15°	1732	1736	1758
20°	1711	1724	1756
25°	1685	1712	1755
30°	1653	1698	1753
35°	1620	1681	1754
40°	1583	1668	1765
45°	1545	1658	1780
50°	1499	1653	1807
55°	1462	1656	1843
60°	1405	1670	1906
65°	1341	1687	1975
70°	1269	1739	2085
75°	1132	1814	2278
80°	965	1921	2328
85°	689	1903	2228



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	123.4	3.1
10°-20°	352.9	8.9
20°-30°	533.0	13.5
30°-40°	642.4	16.2
40°-50°	674.4	17.1
50°-60°	630.9	16.0
60°-70°	521.0	13.2
70°-80°	355.0	9.0
80°-90°	121.1	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°	1009.3	25.5
0°-40°	1651.6	41.8
0°-60°	2956.9	74.8
0°-90°	3954.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3954.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1304	1304	1304	1304	1304	
5°	1301	1300	1294	1301	1301	123
15°	1244	1245	1246	1259	1262	351
25°	1135	1140	1153	1175	1182	522
35°	986	997	1023	1057	1068	616
45°	812	829	871	918	935	626
55°	623	648	706	764	786	556
65°	421	456	530	597	620	418
75°	218	268	349	414	438	232
85°	45	88	123	139	144	56
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1304.0	1304.0	1304.0	1304.0	1304.0
2.5°	1305.3	1304.0	1297.4	1304.0	1302.7
5°	1301.4	1300.1	1293.5	1301.4	1301.4
7.5°	1292.2	1292.2	1285.6	1294.8	1296.1
10°	1279.1	1279.1	1275.1	1285.6	1285.6
12.5°	1263.3	1263.3	1263.3	1273.8	1275.1
15°	1243.6	1245.0	1246.3	1259.4	1262.0
17.5°	1220.0	1222.7	1226.6	1242.3	1245.0
20°	1195.1	1197.7	1204.3	1222.7	1226.6
22.5°	1163.6	1170.2	1179.4	1200.4	1204.3
25°	1134.8	1140.0	1153.1	1175.4	1182.0
27.5°	1099.3	1107.2	1124.3	1147.9	1157.1
30°	1063.9	1071.8	1092.8	1120.3	1128.2
32.5°	1025.9	1037.7	1060.0	1088.8	1098.0
35°	986.5	997.0	1023.3	1057.4	1067.9
37.5°	943.2	957.7	986.5	1023.3	1036.4
40°	901.3	917.0	949.8	989.1	1004.9
42.5°	859.3	875.0	911.7	956.4	972.1
45°	812.0	829.1	871.1	918.3	935.4
47.5°	764.8	785.8	831.7	881.6	899.9
50°	716.3	739.9	789.7	842.2	863.2
52.5°	673.0	695.3	747.8	804.2	823.9
55°	623.1	648.1	705.8	763.5	785.8
57.5°	572.0	599.5	661.2	724.2	746.5
60°	522.1	552.3	620.5	683.5	708.4
62.5°	473.6	503.8	574.6	640.2	665.1
65°	421.1	456.5	530.0	596.9	620.5
67.5°	371.3	409.3	486.7	552.3	575.9
70°	322.7	359.5	442.1	506.4	530.0
72.5°	270.2	312.2	394.9	461.8	486.7
75°	217.8	267.6	349.0	414.5	438.2
77.5°	169.2	220.4	301.7	355.5	367.3
80°	124.6	177.1	247.9	286.0	300.4
82.5°	80.0	132.5	188.9	216.5	228.3
85°	44.6	87.9	123.3	139.1	144.3
87.5°	18.4	38.0	49.9	56.4	56.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)