

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: P313975

Luminaire Tested: **24FCZ2-45-UNV-L83050-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: P313975  
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-L83050-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**

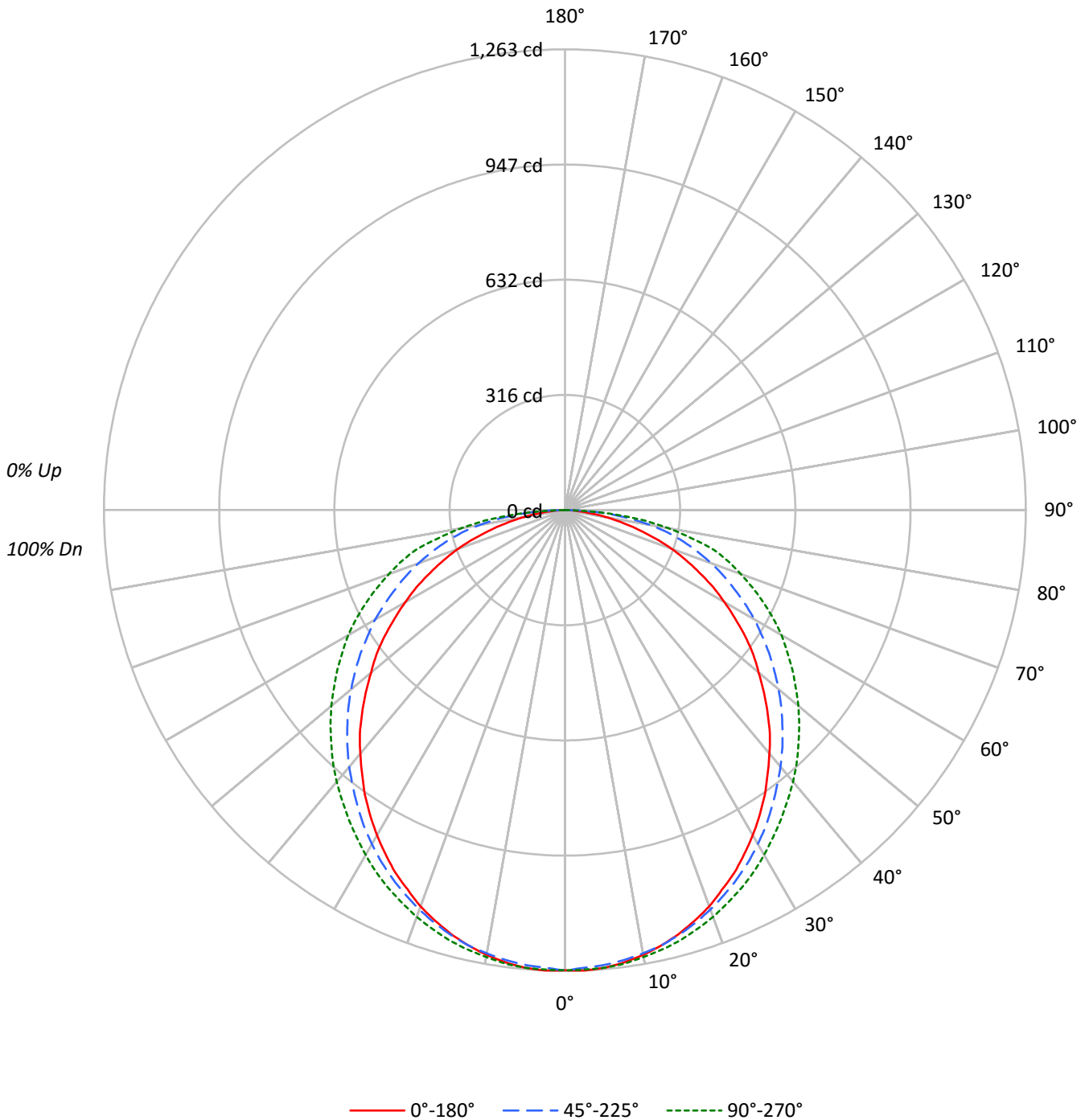
Lumens per Lamp: N/A  
Luminaire Lumens: 3826.0 lumens  
Efficiency: N/A  
Efficacy: 102.0 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 37.5  
Input Voltage (V): NR  
Input Current (A<sub>in</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°	1698	1698	1698
5°	1701	1690	1701
10°	1691	1686	1700
15°	1676	1680	1701
20°	1656	1669	1699
25°	1630	1656	1698
30°	1599	1643	1696
35°	1568	1626	1697
40°	1532	1614	1708
45°	1495	1604	1722
50°	1451	1600	1748
55°	1415	1602	1784
60°	1359	1616	1845
65°	1297	1633	1911
70°	1229	1683	2017
75°	1095	1756	2204
80°	934	1859	2252
85°	667	1842	2155



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	119.4	3.1
10°-20°	341.4	8.9
20°-30°	515.7	13.5
30°-40°	621.6	16.2
40°-50°	652.5	17.1
50°-60°	610.5	16.0
60°-70°	504.1	13.2
70°-80°	343.5	9.0
80°-90°	117.2	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°	976.6	25.5
0°-40°	1598.1	41.8
0°-60°	2861.2	74.8
0°-90°	3826.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3826.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1262	1262	1262	1262	1262	
5°	1259	1258	1252	1259	1259	119
15°	1203	1205	1206	1219	1221	339
25°	1098	1103	1116	1137	1144	505
35°	955	965	990	1023	1033	597
45°	786	802	843	889	905	606
55°	603	627	683	739	760	538
65°	408	442	513	578	600	404
75°	211	259	338	401	424	225
85°	43	85	119	135	140	54
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1261.8	1261.8	1261.8	1261.8	1261.8
2.5°	1263.1	1261.8	1255.4	1261.8	1260.5
5°	1259.2	1258.0	1251.6	1259.2	1259.2
7.5°	1250.4	1250.4	1244.0	1252.9	1254.2
10°	1237.7	1237.7	1233.9	1244.0	1244.0
12.5°	1222.4	1222.4	1222.4	1232.6	1233.9
15°	1203.4	1204.7	1205.9	1218.6	1221.2
17.5°	1180.5	1183.1	1186.9	1202.1	1204.7
20°	1156.4	1159.0	1165.3	1183.1	1186.9
22.5°	1126.0	1132.3	1141.2	1161.5	1165.3
25°	1098.0	1103.1	1115.8	1137.4	1143.7
27.5°	1063.8	1071.4	1087.9	1110.7	1119.6
30°	1029.5	1037.1	1057.4	1084.1	1091.7
32.5°	992.7	1004.1	1025.7	1053.6	1062.5
35°	954.6	964.7	990.1	1023.1	1033.3
37.5°	912.7	926.7	954.6	990.1	1002.8
40°	872.1	887.3	919.0	957.1	972.4
42.5°	831.5	846.7	882.2	925.4	940.6
45°	785.8	802.3	842.9	888.6	905.1
47.5°	740.1	760.4	804.8	853.0	870.8
50°	693.1	715.9	764.2	815.0	835.3
52.5°	651.2	672.8	723.6	778.1	797.2
55°	603.0	627.1	682.9	738.8	760.4
57.5°	553.5	580.1	639.8	700.7	722.3
60°	505.2	534.4	600.4	661.4	685.5
62.5°	458.3	487.4	556.0	619.5	643.6
65°	407.5	441.8	512.8	577.6	600.4
67.5°	359.2	396.1	470.9	534.4	557.3
70°	312.3	347.8	427.8	490.0	512.8
72.5°	261.5	302.1	382.1	446.8	470.9
75°	210.7	259.0	337.7	401.1	424.0
77.5°	163.8	213.3	292.0	344.0	355.4
80°	120.6	171.4	239.9	276.7	290.7
82.5°	77.4	128.2	182.8	209.5	220.9
85°	43.2	85.0	119.3	134.6	139.6
87.5°	17.8	36.8	48.2	54.6	54.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)