

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: P310830

Luminaire Tested: **24FCZ2-45-UNV-L82765-CP125-W2A-U-5700K**

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: P310830  
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-5700K  
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" POLYCARB SHEET  
Light Source: (168) 5700K 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**

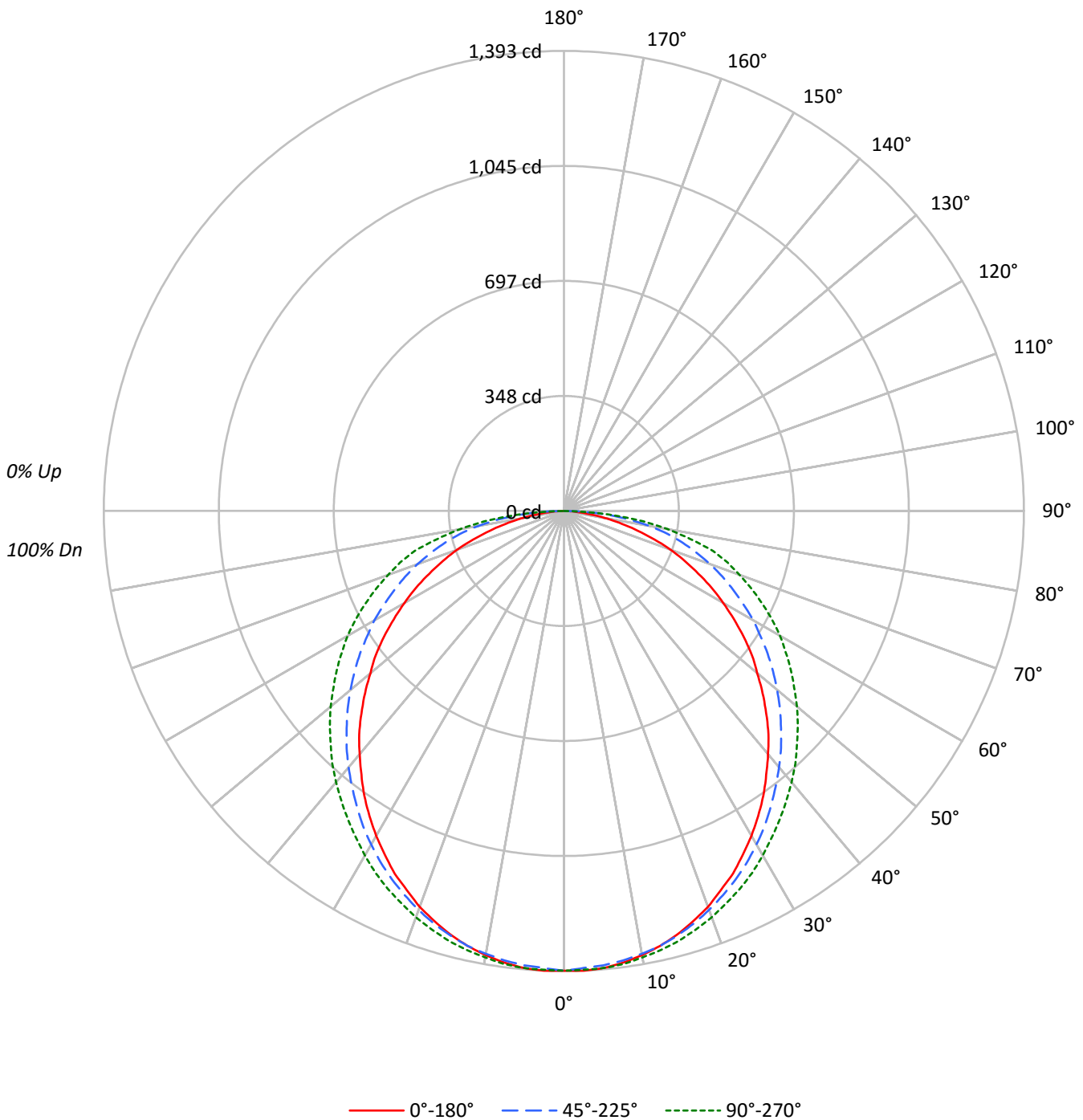
Lumens per Lamp: N/A  
Luminaire Lumens: 4221.0 lumens  
Efficiency: N/A  
Efficacy: 109.1 lumens/watt  
Spacing Criteria (0/90/45): 1.22 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 38.7  
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°	1873	1873	1873
5°	1876	1865	1876
10°	1865	1860	1875
15°	1849	1853	1877
20°	1827	1841	1875
25°	1798	1828	1873
30°	1765	1812	1871
35°	1730	1794	1872
40°	1690	1781	1884
45°	1650	1769	1900
50°	1600	1765	1929
55°	1560	1767	1968
60°	1500	1783	2035
65°	1431	1801	2109
70°	1355	1857	2226
75°	1209	1936	2432
80°	1031	2051	2485
85°	735	2032	2377



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	131.7	3.1
10°-20°	376.7	8.9
20°-30°	569.0	13.5
30°-40°	685.7	16.2
40°-50°	719.9	17.1
50°-60°	673.5	16.0
60°-70°	556.2	13.2
70°-80°	379.0	9.0
80°-90°	129.2	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°	1077.4	25.5
0°-40°	1763.1	41.8
0°-60°	3156.5	74.8
0°-90°	4221.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4221.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1392	1392	1392	1392	1392	
5°	1389	1388	1381	1389	1389	132
15°	1328	1329	1330	1344	1347	374
25°	1211	1217	1231	1255	1262	557
35°	1053	1064	1092	1129	1140	658
45°	867	885	930	980	998	669
55°	665	692	753	815	839	594
65°	450	487	566	637	662	446
75°	232	286	372	442	468	248
85°	48	94	132	148	154	60
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1392.0	1392.0	1392.0	1392.0	1392.0
2.5°	1393.4	1392.0	1385.0	1392.0	1390.6
5°	1389.2	1387.8	1380.8	1389.2	1389.2
7.5°	1379.4	1379.4	1372.4	1382.2	1383.6
10°	1365.4	1365.4	1361.2	1372.4	1372.4
12.5°	1348.6	1348.6	1348.6	1359.8	1361.2
15°	1327.6	1329.0	1330.4	1344.4	1347.2
17.5°	1302.4	1305.2	1309.4	1326.2	1329.0
20°	1275.8	1278.6	1285.6	1305.2	1309.4
22.5°	1242.2	1249.2	1259.0	1281.4	1285.6
25°	1211.4	1217.0	1231.0	1254.8	1261.8
27.5°	1173.6	1182.0	1200.2	1225.4	1235.2
30°	1135.8	1144.2	1166.6	1196.0	1204.4
32.5°	1095.2	1107.8	1131.6	1162.4	1172.2
35°	1053.1	1064.3	1092.4	1128.8	1140.0
37.5°	1006.9	1022.3	1053.1	1092.4	1106.4
40°	962.1	978.9	1013.9	1055.9	1072.7
42.5°	917.3	934.1	973.3	1020.9	1037.7
45°	866.9	885.1	929.9	980.3	998.5
47.5°	816.5	838.9	887.9	941.1	960.7
50°	764.6	789.9	843.1	899.1	921.5
52.5°	718.4	742.2	798.3	858.5	879.5
55°	665.2	691.8	753.4	815.1	838.9
57.5°	610.6	640.0	705.8	773.0	796.9
60°	557.4	589.6	662.4	729.6	756.2
62.5°	505.6	537.8	613.4	683.4	710.0
65°	449.5	487.4	565.8	637.2	662.4
67.5°	396.3	436.9	519.6	589.6	614.8
70°	344.5	383.7	472.0	540.6	565.8
72.5°	288.5	333.3	421.5	493.0	519.6
75°	232.5	285.7	372.5	442.5	467.8
77.5°	180.7	235.3	322.1	379.5	392.1
80°	133.0	189.1	264.7	305.3	320.7
82.5°	85.4	141.4	201.7	231.1	243.7
85°	47.6	93.8	131.6	148.4	154.0
87.5°	19.6	40.6	53.2	60.2	60.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)