

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: P310735

Luminaire Tested: **24FCZ2-40-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: P310735  
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-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

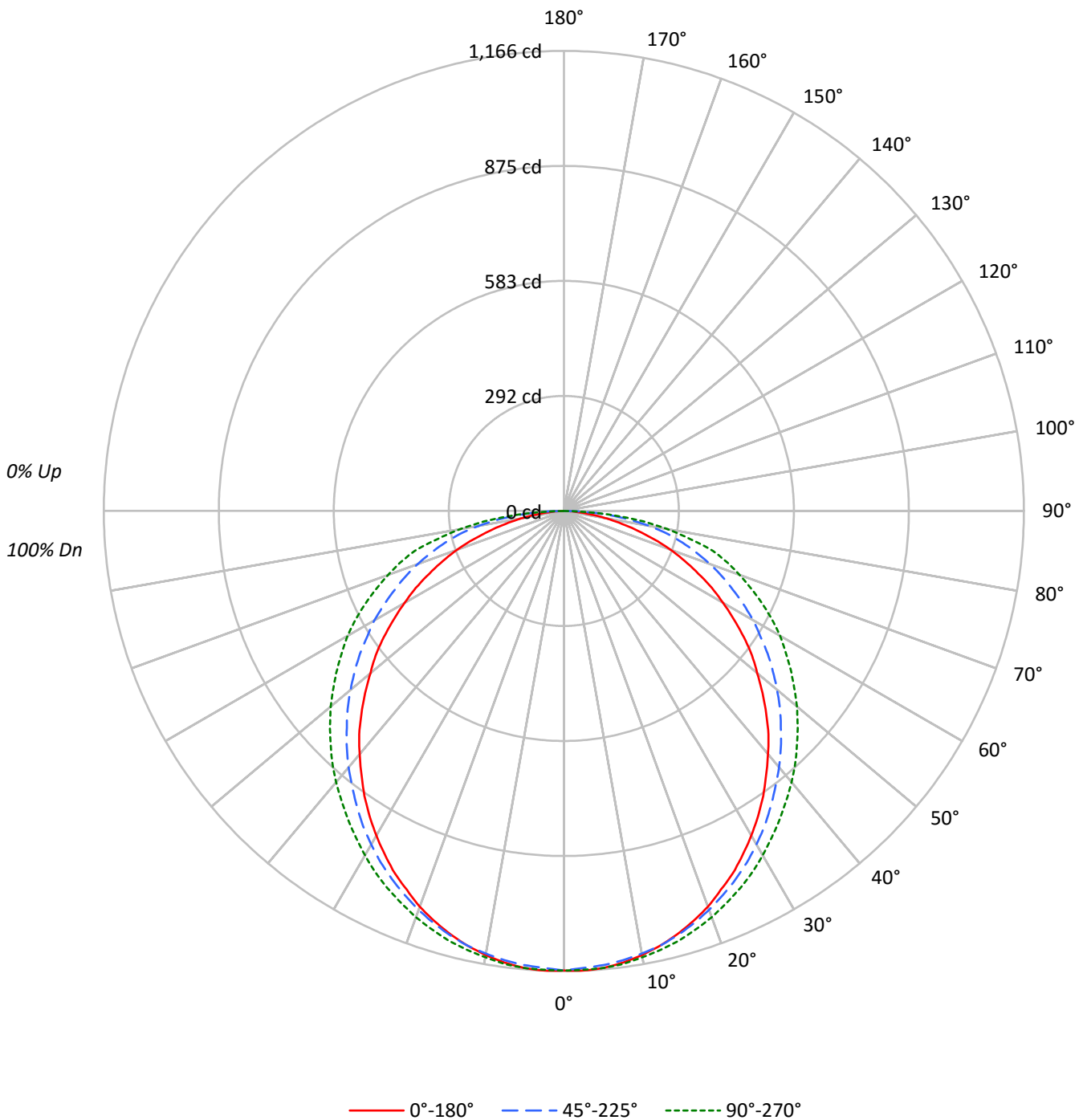
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3532.0 lumens  
Efficiency: N/A  
Efficacy: 107.4 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): 32.9  
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°	1567	1567	1567
5°	1570	1561	1570
10°	1561	1556	1569
15°	1547	1551	1570
20°	1529	1540	1569
25°	1505	1529	1567
30°	1477	1517	1566
35°	1447	1501	1567
40°	1414	1490	1577
45°	1380	1481	1590
50°	1339	1477	1614
55°	1306	1479	1647
60°	1255	1492	1703
65°	1198	1507	1765
70°	1134	1554	1862
75°	1011	1620	2035
80°	862	1716	2080
85°	614	1701	1990



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	110.2	3.1
10°-20°	315.2	8.9
20°-30°	476.1	13.5
30°-40°	573.8	16.2
40°-50°	602.4	17.1
50°-60°	563.6	16.0
60°-70°	465.4	13.2
70°-80°	317.1	9.0
80°-90°	108.2	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°	901.5	25.5
0°-40°	1475.3	41.8
0°-60°	2641.3	74.8
0°-90°	3532.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3532.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1165	1165	1165	1165	1165	
5°	1162	1161	1155	1162	1162	110
15°	1111	1112	1113	1125	1127	313
25°	1014	1018	1030	1050	1056	466
35°	881	891	914	944	954	551
45°	725	741	778	820	836	559
55°	557	579	630	682	702	497
65°	376	408	473	533	554	373
75°	194	239	312	370	391	207
85°	40	78	110	124	129	50
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1164.8	1164.8	1164.8	1164.8	1164.8
2.5°	1166.0	1164.8	1159.0	1164.8	1163.7
5°	1162.5	1161.3	1155.4	1162.5	1162.5
7.5°	1154.3	1154.3	1148.4	1156.6	1157.8
10°	1142.6	1142.6	1139.0	1148.4	1148.4
12.5°	1128.5	1128.5	1128.5	1137.9	1139.0
15°	1110.9	1112.1	1113.3	1125.0	1127.3
17.5°	1089.8	1092.2	1095.7	1109.7	1112.1
20°	1067.6	1069.9	1075.8	1092.2	1095.7
22.5°	1039.4	1045.3	1053.5	1072.2	1075.8
25°	1013.7	1018.3	1030.1	1050.0	1055.8
27.5°	982.0	989.0	1004.3	1025.4	1033.6
30°	950.4	957.4	976.2	1000.8	1007.8
32.5°	916.4	926.9	946.9	972.6	980.8
35°	881.2	890.6	914.0	944.5	953.9
37.5°	842.6	855.5	881.2	914.0	925.8
40°	805.1	819.1	848.4	883.6	897.6
42.5°	767.6	781.6	814.4	854.3	868.3
45°	725.4	740.6	778.1	820.3	835.5
47.5°	683.2	701.9	743.0	787.5	803.9
50°	639.8	660.9	705.5	752.3	771.1
52.5°	601.2	621.1	668.0	718.3	735.9
55°	556.6	578.9	630.5	682.0	701.9
57.5°	510.9	535.5	590.6	646.9	666.8
60°	466.4	493.4	554.3	610.5	632.8
62.5°	423.0	450.0	513.3	571.9	594.1
65°	376.2	407.8	473.4	533.2	554.3
67.5°	331.6	365.6	434.8	493.4	514.4
70°	288.3	321.1	394.9	452.3	473.4
72.5°	241.4	278.9	352.7	412.5	434.8
75°	194.5	239.1	311.7	370.3	391.4
77.5°	151.2	196.9	269.5	317.6	328.1
80°	111.3	158.2	221.5	255.5	268.4
82.5°	71.5	118.4	168.7	193.4	203.9
85°	39.8	78.5	110.2	124.2	128.9
87.5°	16.4	34.0	44.5	50.4	50.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)