

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: P310756

Luminaire Tested: **24FCZ2-40-UNV-L82765-CP250-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: P310756  
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-CP250-W2A-U-5000K  
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.250" POLYCARB 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**

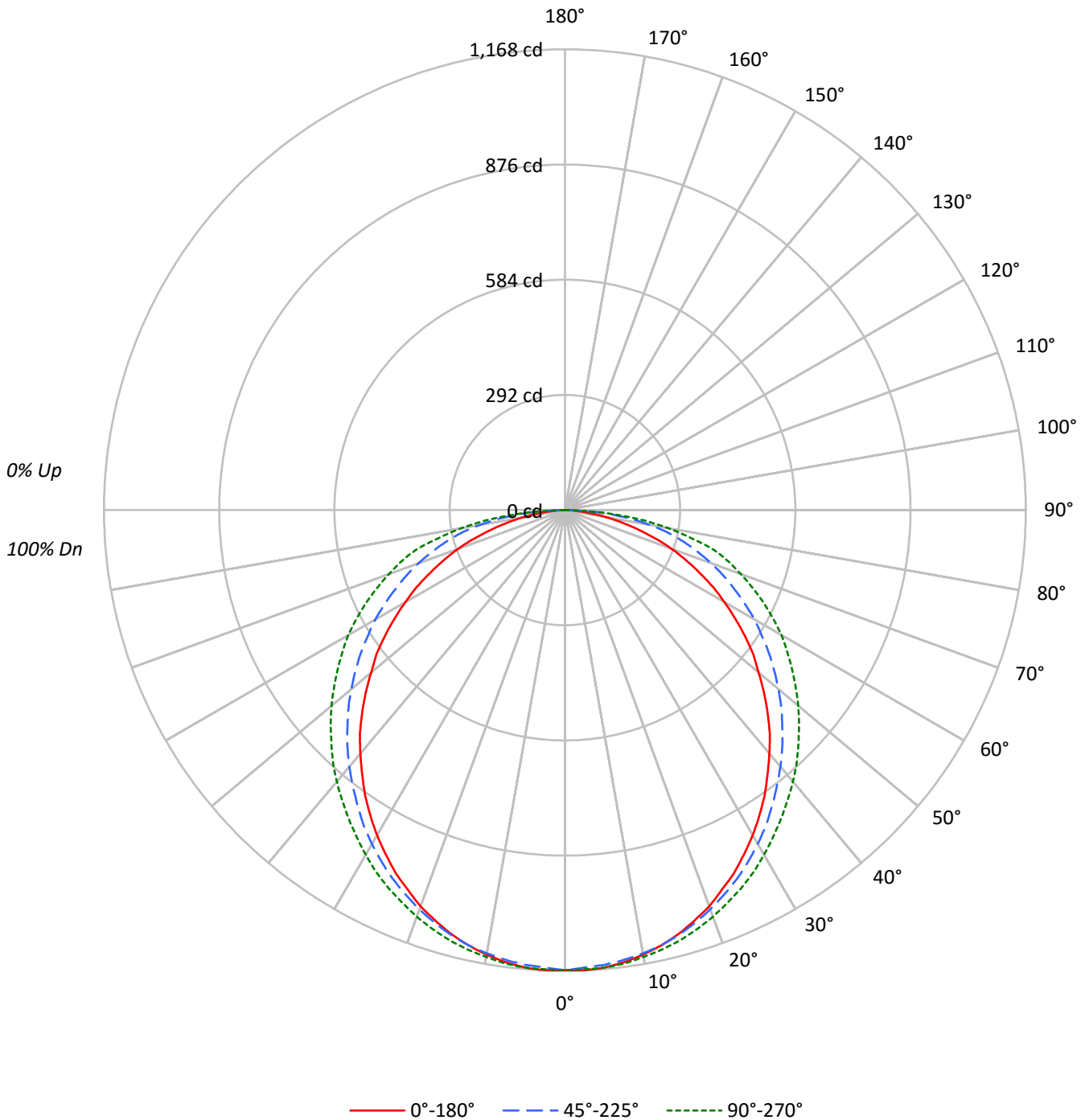
Lumens per Lamp: N/A  
Luminaire Lumens: 3537.0 lumens  
Efficiency: N/A  
Efficacy: 105.6 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 33.5  
Input Voltage (V): NR  
Input Current (A<sub>in</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°	1570	1570	1570
5°	1572	1563	1572
10°	1563	1558	1571
15°	1550	1553	1573
20°	1531	1543	1571
25°	1507	1531	1570
30°	1479	1519	1568
35°	1450	1503	1569
40°	1416	1492	1579
45°	1382	1483	1592
50°	1341	1479	1616
55°	1308	1481	1649
60°	1257	1494	1705
65°	1199	1509	1767
70°	1136	1556	1865
75°	1013	1623	2038
80°	864	1719	2082
85°	616	1703	1993



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	110.4	3.1
10°-20°	315.7	8.9
20°-30°	476.8	13.5
30°-40°	574.6	16.2
40°-50°	603.2	17.1
50°-60°	564.4	16.0
60°-70°	466.1	13.2
70°-80°	317.6	9.0
80°-90°	108.3	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°	902.8	25.5
0°-40°	1477.4	41.8
0°-60°	2645.0	74.8
0°-90°	3537.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3537.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1166	1166	1166	1166	1166	
5°	1164	1163	1157	1164	1164	110
15°	1112	1114	1115	1127	1129	314
25°	1015	1020	1032	1052	1057	467
35°	882	892	915	946	955	551
45°	726	742	779	822	837	560
55°	557	580	631	683	703	498
65°	377	408	474	534	555	374
75°	195	239	312	371	392	208
85°	40	79	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°	1166.5	1166.5	1166.5	1166.5	1166.5
2.5°	1167.6	1166.5	1160.6	1166.5	1165.3
5°	1164.1	1163.0	1157.1	1164.1	1164.1
7.5°	1155.9	1155.9	1150.0	1158.3	1159.4
10°	1144.2	1144.2	1140.7	1150.0	1150.0
12.5°	1130.1	1130.1	1130.1	1139.5	1140.7
15°	1112.5	1113.7	1114.8	1126.6	1128.9
17.5°	1091.4	1093.7	1097.2	1111.3	1113.7
20°	1069.1	1071.4	1077.3	1093.7	1097.2
22.5°	1040.9	1046.8	1055.0	1073.8	1077.3
25°	1015.1	1019.8	1031.5	1051.5	1057.3
27.5°	983.4	990.4	1005.7	1026.8	1035.0
30°	951.7	958.8	977.5	1002.2	1009.2
32.5°	917.7	928.2	948.2	974.0	982.2
35°	882.5	891.9	915.3	945.9	955.2
37.5°	843.8	856.7	882.5	915.3	927.1
40°	806.2	820.3	849.6	884.8	898.9
42.5°	768.7	782.7	815.6	855.5	869.6
45°	726.4	741.7	779.2	821.5	836.7
47.5°	684.2	702.9	744.0	788.6	805.0
50°	640.7	661.9	706.5	753.4	772.2
52.5°	602.0	622.0	668.9	719.4	737.0
55°	557.4	579.7	631.3	683.0	702.9
57.5°	511.7	536.3	591.5	647.8	667.7
60°	467.1	494.0	555.1	611.4	633.7
62.5°	423.6	450.6	514.0	572.7	595.0
65°	376.7	408.4	474.1	533.9	555.1
67.5°	332.1	366.1	435.4	494.0	515.2
70°	288.7	321.5	395.5	453.0	474.1
72.5°	241.7	279.3	353.2	413.1	435.4
75°	194.8	239.4	312.2	370.8	392.0
77.5°	151.4	197.2	269.9	318.0	328.6
80°	111.5	158.4	221.8	255.8	268.7
82.5°	71.6	118.5	169.0	193.6	204.2
85°	39.9	78.6	110.3	124.4	129.1
87.5°	16.4	34.0	44.6	50.5	50.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)