

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: P313656

Luminaire Tested: **24FCZ2-50-UNV-L83050-RDP-CP187-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: P313656  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: 24FCZ2-50-UNV-L83050-RDP-CP187-W2A-U-3500K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.187" 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**

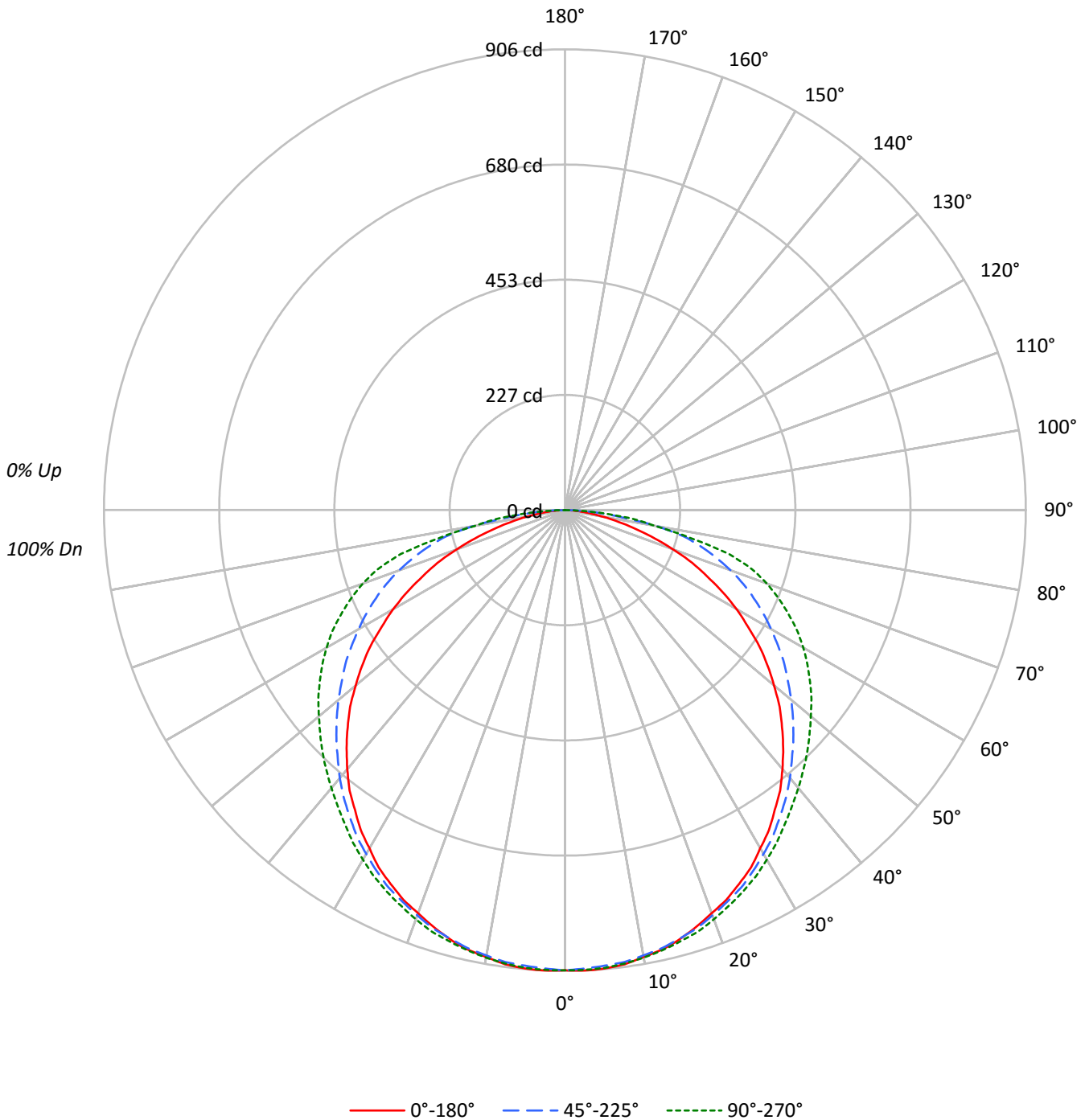
Lumens per Lamp: N/A  
Luminaire Lumens: 2878.0 lumens  
Efficiency: N/A  
Efficacy: 67.4 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 42.7  
Input Voltage (V): NR  
Input Current (Ain): NR  
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	93	89	92	89	87	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	68	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	1218	1218	1218
5°	1222	1215	1220
10°	1219	1215	1221
15°	1217	1215	1223
20°	1208	1214	1226
25°	1204	1216	1229
30°	1193	1213	1233
35°	1182	1210	1238
40°	1168	1209	1254
45°	1149	1209	1282
50°	1123	1216	1321
55°	1095	1236	1380
60°	1049	1260	1456
65°	982	1304	1545
70°	893	1365	1662
75°	757	1439	1736
80°	597	1449	1405
85°	442	1102	1233



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	85.9	3.0
10°-20°	247.1	8.6
20°-30°	377.8	13.1
30°-40°	461.9	16.0
40°-50°	492.3	17.1
50°-60°	470.7	16.4
60°-70°	398.7	13.9
70°-80°	268.0	9.3
80°-90°	75.6	2.6
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°	710.8	24.7
0°-40°	1172.7	40.7
0°-60°	2135.7	74.2
0°-90°	2878.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2878.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	905	905	905	905	905	
5°	905	904	899	904	904	86
15°	874	874	872	879	878	246
25°	811	814	819	826	828	374
35°	720	725	737	751	754	451
45°	604	614	635	662	674	466
55°	467	484	527	568	588	416
65°	308	340	410	464	485	306
75°	146	198	277	324	334	156
85°	29	58	71	77	80	35
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	905.0	905.0	905.0	905.0	905.0
2.5°	906.5	906.5	902.2	905.0	905.0
5°	905.0	903.6	899.3	903.6	903.6
7.5°	900.8	899.3	896.5	900.8	899.3
10°	892.2	892.2	889.3	893.6	893.6
12.5°	885.1	883.6	882.2	887.9	886.5
15°	873.6	873.6	872.2	879.4	877.9
17.5°	859.4	860.8	862.2	867.9	869.4
20°	843.7	846.5	847.9	856.5	856.5
22.5°	829.4	830.8	833.7	842.2	842.2
25°	810.8	813.7	819.4	826.5	828.0
27.5°	792.3	793.7	800.8	810.8	812.3
30°	768.0	772.3	780.9	792.3	793.7
32.5°	746.6	750.9	760.9	772.3	775.1
35°	719.5	725.2	736.6	750.9	753.7
37.5°	695.2	699.5	713.8	729.5	733.7
40°	665.2	673.8	688.1	706.6	713.8
42.5°	635.2	643.8	660.9	685.2	693.8
45°	603.8	613.8	635.2	662.4	673.8
47.5°	572.4	583.9	608.1	639.5	652.4
50°	536.7	551.0	581.0	616.7	631.0
52.5°	502.5	519.6	552.5	592.4	611.0
55°	466.8	483.9	526.8	568.2	588.1
57.5°	426.8	449.7	496.8	543.9	565.3
60°	389.7	411.1	468.2	519.6	541.0
62.5°	349.7	378.3	439.7	493.9	515.3
65°	308.3	339.8	409.7	463.9	485.4
67.5°	271.2	305.5	379.7	434.0	455.4
70°	227.0	269.8	346.9	401.1	422.5
72.5°	185.6	232.7	312.6	365.4	385.4
75°	145.6	198.4	276.9	324.0	334.0
77.5°	108.5	164.2	239.8	259.8	252.7
80°	77.1	131.3	187.0	177.0	181.3
82.5°	50.0	99.9	115.6	131.3	135.6
85°	28.6	58.5	71.4	77.1	79.9
87.5°	12.8	21.4	28.6	28.6	27.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)