

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: P313657

Luminaire Tested: **24FCZ2-50-UNV-L83050-RDP-CP187-W2A-U-4000K**

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: P313657  
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-4000K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.187" POLYCARB SHEET  
Light Source: (168) 4000K 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**

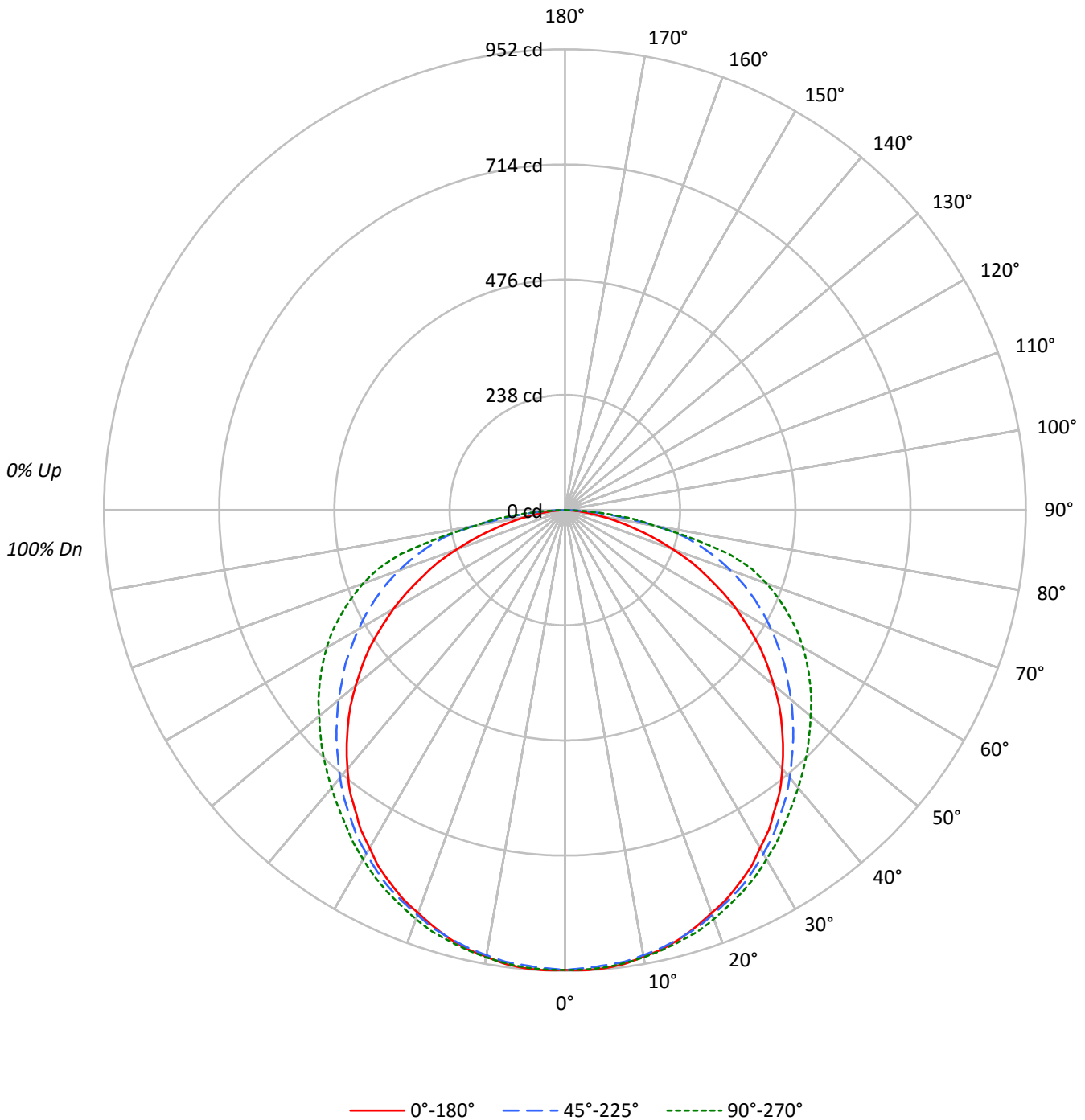
Lumens per Lamp: N/A  
Luminaire Lumens: 3022.0 lumens  
Efficiency: N/A  
Efficacy: 69.2 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 43.7  
Input Voltage (V): NR  
Input Current (Ain): NR  
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	67	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°	1279	1279	1279
5°	1284	1275	1281
10°	1280	1276	1282
15°	1278	1276	1284
20°	1268	1275	1288
25°	1264	1277	1291
30°	1253	1274	1295
35°	1241	1271	1300
40°	1227	1269	1316
45°	1207	1269	1346
50°	1180	1277	1387
55°	1150	1297	1449
60°	1101	1323	1529
65°	1031	1370	1622
70°	937	1433	1745
75°	795	1512	1824
80°	627	1522	1475
85°	463	1156	1295



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	90.1	3.0
10°-20°	259.4	8.6
20°-30°	396.7	13.1
30°-40°	485.0	16.0
40°-50°	516.9	17.1
50°-60°	494.3	16.4
60°-70°	418.7	13.9
70°-80°	281.4	9.3
80°-90°	79.4	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°	746.3	24.7
0°-40°	1231.4	40.7
0°-60°	2242.5	74.2
0°-90°	3022.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3022.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	950	950	950	950	950	
5°	950	949	944	949	949	90
15°	917	917	916	923	922	259
25°	851	854	860	868	869	392
35°	756	762	774	788	791	473
45°	634	644	667	696	708	489
55°	490	508	553	597	618	437
65°	324	357	430	487	510	321
75°	153	208	291	340	351	164
85°	30	62	75	81	84	37
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	950.3	950.3	950.3	950.3	950.3
2.5°	951.8	951.8	947.3	950.3	950.3
5°	950.3	948.8	944.3	948.8	948.8
7.5°	945.8	944.3	941.3	945.8	944.3
10°	936.8	936.8	933.8	938.3	938.3
12.5°	929.3	927.8	926.3	932.3	930.8
15°	917.4	917.4	915.9	923.4	921.9
17.5°	902.4	903.9	905.4	911.4	912.9
20°	885.9	888.9	890.4	899.4	899.4
22.5°	870.9	872.4	875.4	884.4	884.4
25°	851.4	854.4	860.4	867.9	869.4
27.5°	831.9	833.4	840.9	851.4	852.9
30°	806.4	810.9	819.9	831.9	833.4
32.5°	783.9	788.4	798.9	810.9	813.9
35°	755.5	761.5	773.5	788.4	791.4
37.5°	730.0	734.5	749.5	766.0	770.5
40°	698.5	707.5	722.5	742.0	749.5
42.5°	667.0	676.0	694.0	719.5	728.5
45°	634.1	644.5	667.0	695.5	707.5
47.5°	601.1	613.1	638.6	671.5	685.0
50°	563.6	578.6	610.1	647.5	662.5
52.5°	527.6	545.6	580.1	622.1	641.5
55°	490.2	508.1	553.1	596.6	617.6
57.5°	448.2	472.2	521.6	571.1	593.6
60°	409.2	431.7	491.7	545.6	568.1
62.5°	367.2	397.2	461.7	518.6	541.1
65°	323.8	356.7	430.2	487.2	509.6
67.5°	284.8	320.8	398.7	455.7	478.2
70°	238.3	283.3	364.2	421.2	443.7
72.5°	194.9	244.3	328.3	383.7	404.7
75°	152.9	208.4	290.8	340.3	350.8
77.5°	113.9	172.4	251.8	272.8	265.3
80°	80.9	137.9	196.4	185.9	190.4
82.5°	52.5	104.9	121.4	137.9	142.4
85°	30.0	61.5	74.9	80.9	83.9
87.5°	13.5	22.5	30.0	30.0	28.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)