

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: P313271

Luminaire Tested: **24FCZ2-50-UNV-L83050-HRP-CA125-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: P313271  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-20)  
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-HRP-CA125-W2A-U-3500K  
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" ACRYLIC 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**

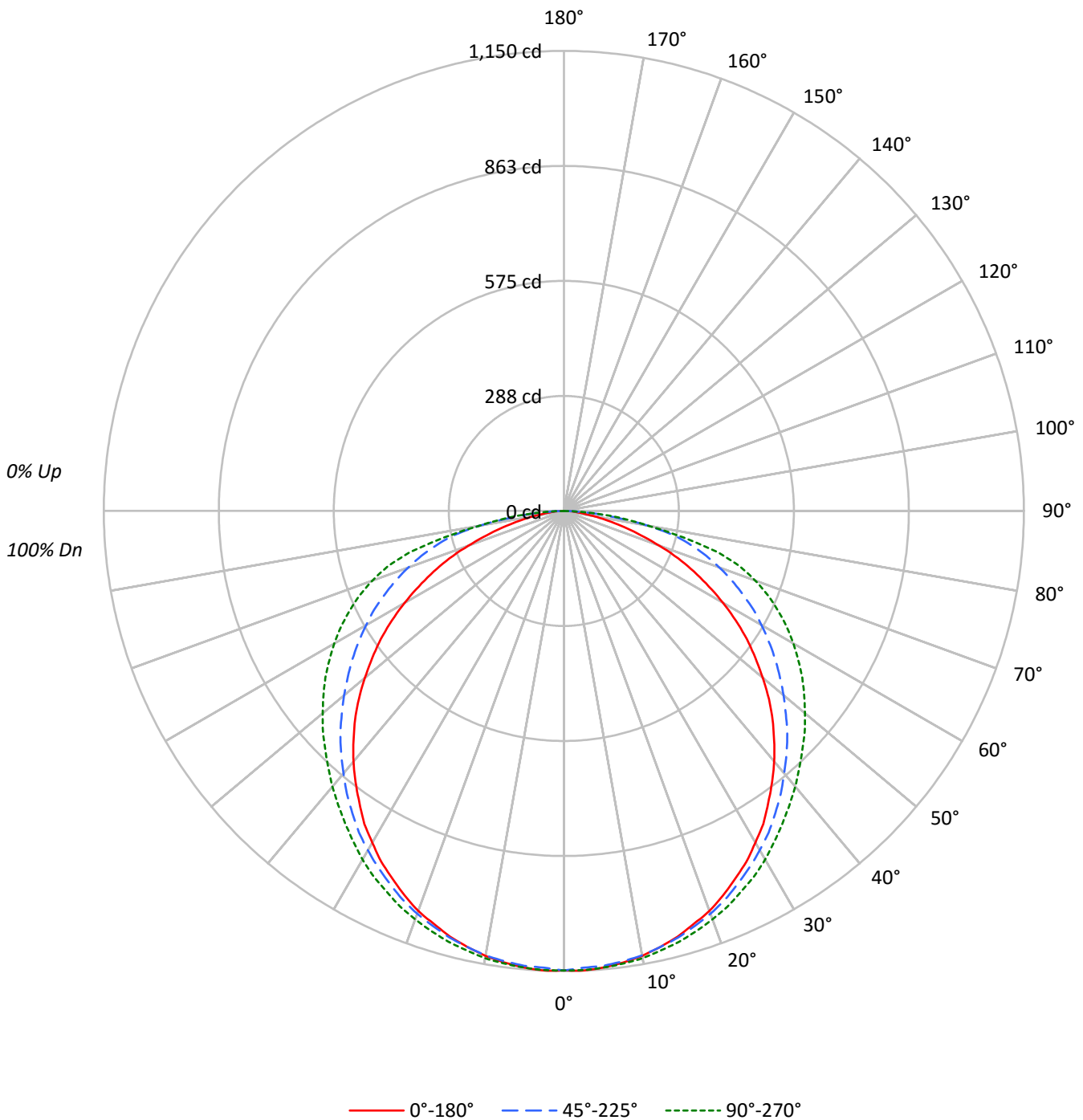
Lumens per Lamp: N/A  
Luminaire Lumens: 3540.0 lumens  
Efficiency: N/A  
Efficacy: 82.9 lumens/watt  
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 42.7  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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	101	96	93	96	93	90	92	90	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58	56
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	36	30	57	44	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	24	35	29	24	23

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

	0°	45°	90°
0°	1545	1545	1545
5°	1547	1541	1547
10°	1543	1541	1551
15°	1534	1538	1552
20°	1524	1534	1555
25°	1505	1527	1558
30°	1487	1522	1563
35°	1463	1514	1565
40°	1437	1505	1580
45°	1404	1503	1605
50°	1359	1501	1647
55°	1311	1512	1707
60°	1236	1535	1783
65°	1142	1571	1883
70°	997	1627	2006
75°	809	1710	2073
80°	597	1677	1677
85°	457	1235	1396



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	108.8	3.1
10°-20°	312.4	8.8
20°-30°	475.7	13.4
30°-40°	577.6	16.3
40°-50°	610.2	17.2
50°-60°	575.8	16.3
60°-70°	478.7	13.5
70°-80°	315.0	8.9
80°-90°	85.8	2.4
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°	896.9	25.3
0°-40°	1474.5	41.7
0°-60°	2660.4	75.2
0°-90°	3540.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3540.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1149	1149	1149	1149	1149	
5°	1146	1146	1141	1146	1146	109
15°	1101	1103	1104	1114	1114	311
25°	1014	1020	1028	1046	1049	468
35°	891	901	922	946	953	558
45°	738	753	790	828	843	568
55°	559	582	645	705	728	498
65°	359	400	494	566	591	354
75°	156	227	329	390	399	168
85°	30	65	80	89	90	36
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1148.6	1148.6	1148.6	1148.6	1148.6
2.5°	1150.0	1148.6	1142.6	1148.6	1148.6
5°	1145.6	1145.6	1141.1	1145.6	1145.6
7.5°	1138.2	1138.2	1135.2	1141.1	1141.1
10°	1129.3	1129.3	1127.8	1135.2	1135.2
12.5°	1116.0	1117.4	1116.0	1124.8	1124.8
15°	1101.1	1102.6	1104.1	1114.5	1114.5
17.5°	1081.9	1084.8	1087.8	1099.6	1101.1
20°	1064.1	1065.6	1071.5	1084.8	1086.3
22.5°	1040.4	1044.8	1052.2	1065.6	1070.0
25°	1013.7	1019.6	1028.5	1046.3	1049.3
27.5°	988.5	992.9	1004.8	1024.1	1030.0
30°	957.4	964.8	979.6	998.9	1006.3
32.5°	927.7	935.1	952.9	973.7	979.6
35°	890.7	901.1	921.8	945.5	952.9
37.5°	855.1	865.5	890.7	917.4	926.3
40°	818.1	829.9	856.6	887.7	899.6
42.5°	778.1	794.4	824.0	858.1	871.4
45°	738.0	752.9	789.9	828.4	843.3
47.5°	695.1	712.8	752.9	798.8	816.6
50°	649.1	671.3	717.3	767.7	786.9
52.5°	603.2	628.4	680.2	736.6	757.3
55°	558.7	582.4	644.7	705.4	727.7
57.5°	509.8	539.5	607.6	672.8	695.1
60°	459.4	492.0	570.6	638.7	662.5
62.5°	409.0	446.1	535.0	603.2	628.4
65°	358.6	400.1	493.5	566.1	591.3
67.5°	309.7	355.7	455.0	527.6	552.8
70°	253.4	311.2	413.5	484.6	509.8
72.5°	201.6	268.2	373.5	440.2	462.4
75°	155.6	226.7	329.0	389.8	398.7
77.5°	114.1	185.3	283.1	303.8	305.3
80°	77.1	148.2	216.4	213.4	216.4
82.5°	50.4	111.2	136.3	152.6	154.1
85°	29.6	65.2	80.0	88.9	90.4
87.5°	14.8	22.2	28.2	29.6	32.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)