

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: P313877

Luminaire Tested: **24FCZ2-35-UNV-L83050-CP125-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: P313877  
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: 24FCZ2-35-UNV-L83050-CP125-W2A-U-4000K  
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" 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**

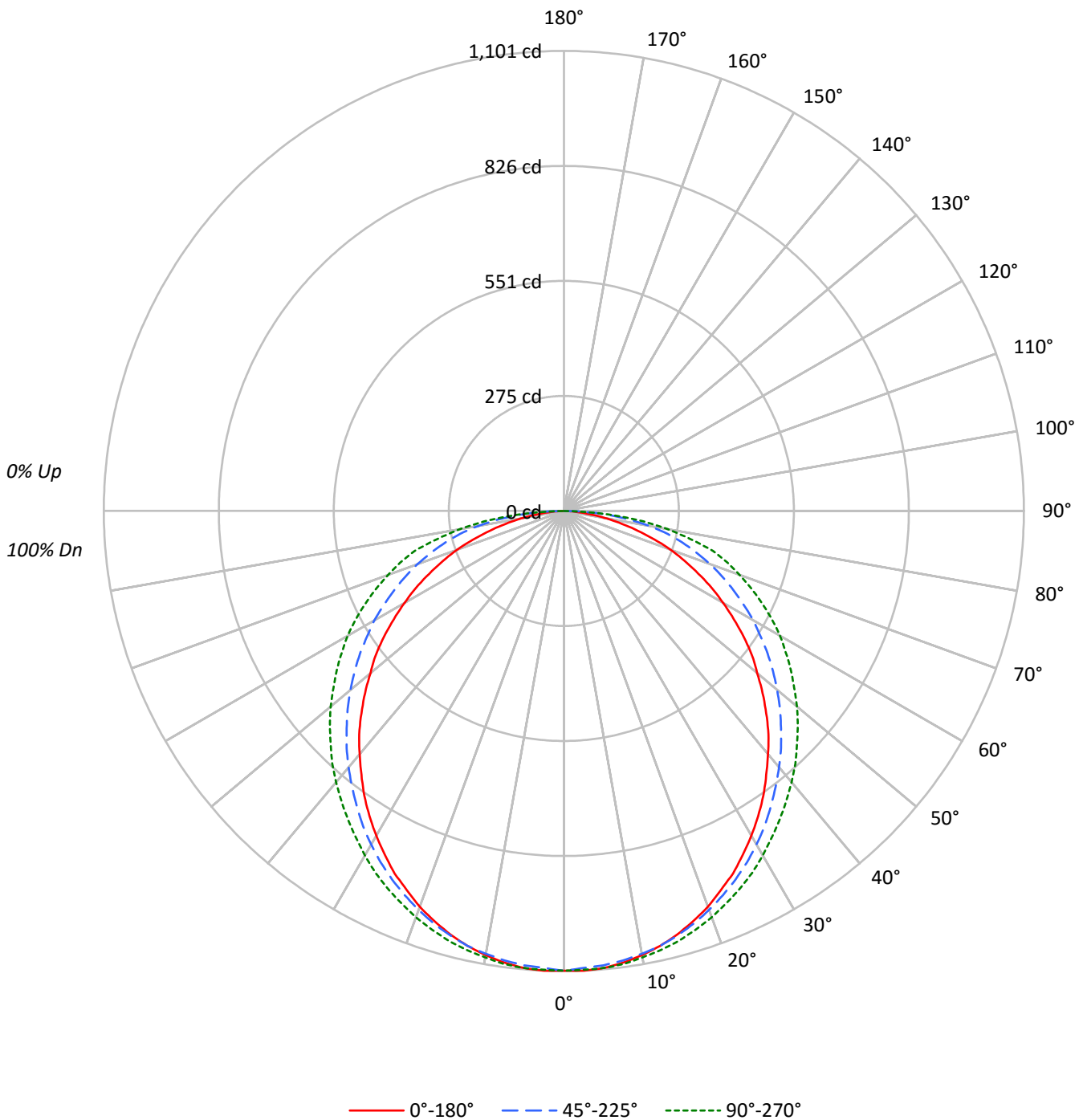
Lumens per Lamp: N/A  
Luminaire Lumens: 3336.0 lumens  
Efficiency: N/A  
Efficacy: 116.6 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 28.6  
Input Voltage (V): NR  
Input Current (A<sub>in</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



TEST NUMBER: P313877

CATALOG NUMBER: 24FCZ2-35-UNV-L83050-CP125-W2A-U-4000K

### Luminous Intensity Polar Plot





TEST NUMBER: P313877

CATALOG NUMBER: 24FCZ2-35-UNV-L83050-CP125-W2A-U-4000K

**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°	1480	1480	1480
5°	1483	1474	1483
10°	1474	1470	1482
15°	1462	1465	1483
20°	1444	1455	1482
25°	1421	1444	1480
30°	1395	1432	1479
35°	1367	1418	1480
40°	1336	1407	1489
45°	1304	1398	1502
50°	1265	1395	1524
55°	1233	1397	1555
60°	1185	1409	1608
65°	1131	1424	1667
70°	1071	1467	1759
75°	955	1530	1922
80°	814	1621	1964
85°	580	1606	1880



TEST NUMBER: P313877

CATALOG NUMBER: 24FCZ2-35-UNV-L83050-CP125-W2A-U-4000K

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	104.1	3.1
10°-20°	297.7	8.9
20°-30°	449.7	13.5
30°-40°	542.0	16.2
40°-50°	569.0	17.1
50°-60°	532.3	16.0
60°-70°	439.6	13.2
70°-80°	299.5	9.0
80°-90°	102.2	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°	851.5	25.5
0°-40°	1393.5	41.8
0°-60°	2494.7	74.8
0°-90°	3336.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3336.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1100	1100	1100	1100	1100	
5°	1098	1097	1091	1098	1098	104
15°	1049	1050	1052	1063	1065	296
25°	957	962	973	992	997	441
35°	832	841	863	892	901	520
45°	685	700	735	775	789	528
55°	526	547	596	644	663	469
65°	355	385	447	504	524	352
75°	184	226	294	350	370	196
85°	38	74	104	117	122	47
90°	0	0	0	0	0	



TEST NUMBER: P313877

CATALOG NUMBER: 24FCZ2-35-UNV-L83050-CP125-W2A-U-4000K

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1100.2	1100.2	1100.2	1100.2	1100.2
2.5°	1101.3	1100.2	1094.6	1100.2	1099.1
5°	1098.0	1096.9	1091.3	1098.0	1098.0
7.5°	1090.2	1090.2	1084.7	1092.4	1093.5
10°	1079.2	1079.2	1075.8	1084.7	1084.7
12.5°	1065.9	1065.9	1065.9	1074.7	1075.8
15°	1049.3	1050.4	1051.5	1062.6	1064.8
17.5°	1029.3	1031.6	1034.9	1048.2	1050.4
20°	1008.3	1010.5	1016.1	1031.6	1034.9
22.5°	981.8	987.3	995.0	1012.7	1016.1
25°	957.4	961.8	972.9	991.7	997.2
27.5°	927.5	934.2	948.5	968.5	976.2
30°	897.6	904.3	922.0	945.2	951.9
32.5°	865.5	875.5	894.3	918.7	926.4
35°	832.3	841.2	863.3	892.1	901.0
37.5°	795.8	808.0	832.3	863.3	874.4
40°	760.4	773.7	801.3	834.5	847.8
42.5°	725.0	738.3	769.2	806.9	820.2
45°	685.1	699.5	734.9	774.8	789.2
47.5°	645.3	663.0	701.7	743.8	759.3
50°	604.3	624.2	666.3	710.6	728.3
52.5°	567.8	586.6	630.9	678.5	695.1
55°	525.7	546.8	595.5	644.2	663.0
57.5°	482.6	505.8	557.8	611.0	629.8
60°	440.5	466.0	523.5	576.7	597.7
62.5°	399.6	425.0	484.8	540.1	561.2
65°	355.3	385.2	447.2	503.6	523.5
67.5°	313.2	345.3	410.6	466.0	485.9
70°	272.3	303.3	373.0	427.2	447.2
72.5°	228.0	263.4	333.2	389.6	410.6
75°	183.7	225.8	294.4	349.8	369.7
77.5°	142.8	185.9	254.6	299.9	309.9
80°	105.1	149.4	209.2	241.3	253.5
82.5°	67.5	111.8	159.4	182.6	192.6
85°	37.6	74.2	104.0	117.3	121.8
87.5°	15.5	32.1	42.1	47.6	47.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)