

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: P313820

Luminaire Tested: **24FCZ2-30-UNV-L83050-CA125-W2A-U-3000K**

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: P313820  
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: 24FCZ2-30-UNV-L83050-CA125-W2A-U-3000K  
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" ACRYLIC SHEET  
Light Source: (168) 3000K 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

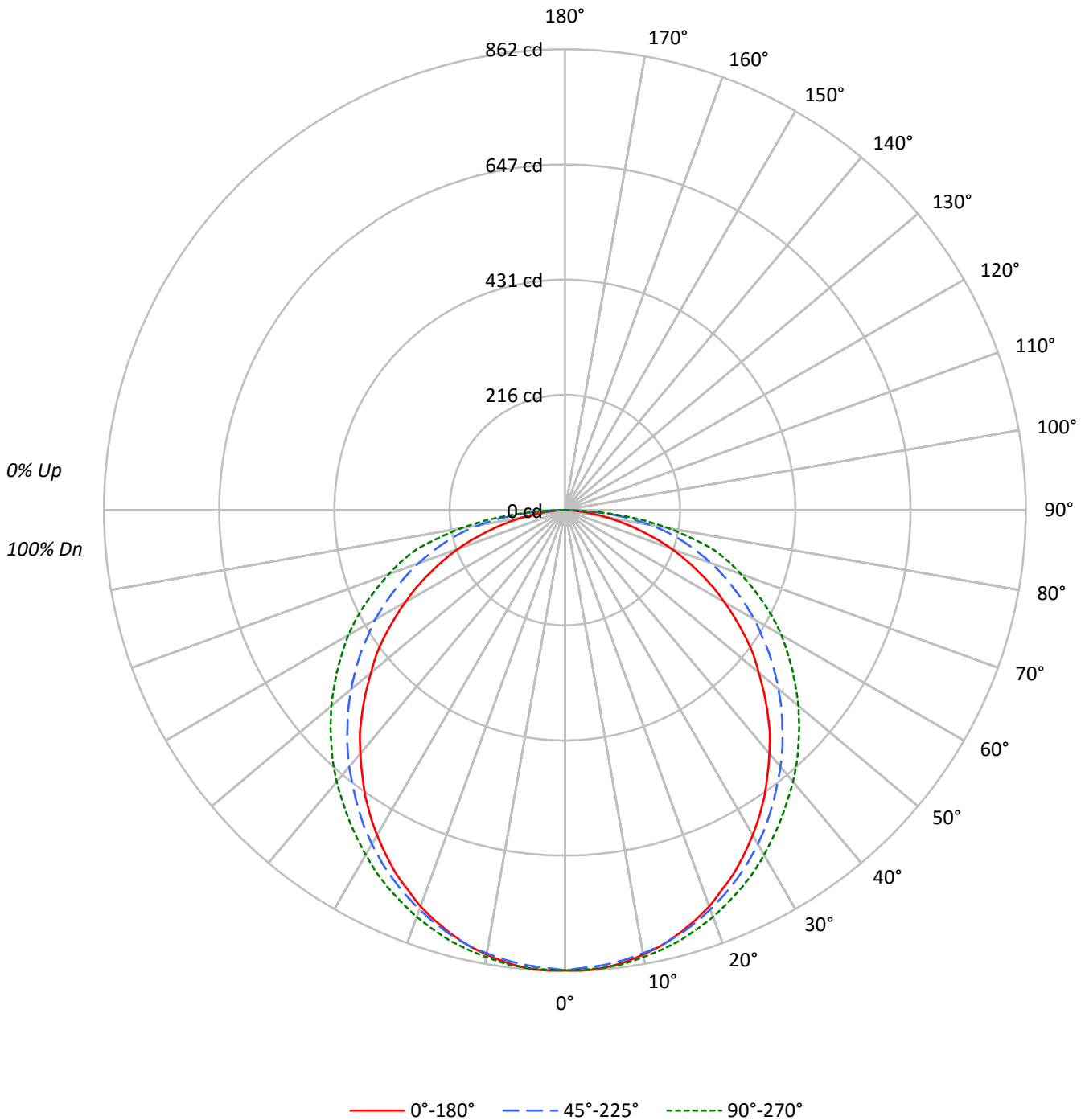
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2611.0 lumens  
Efficiency: N/A  
Efficacy: 111.6 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): 23.4  
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°	1159	1159	1159
5°	1161	1154	1161
10°	1154	1150	1160
15°	1144	1146	1161
20°	1130	1139	1160
25°	1112	1131	1159
30°	1092	1121	1157
35°	1070	1110	1158
40°	1045	1102	1166
45°	1020	1094	1175
50°	990	1092	1193
55°	965	1093	1217
60°	928	1103	1259
65°	885	1114	1305
70°	838	1148	1377
75°	748	1198	1504
80°	638	1268	1537
85°	455	1257	1471



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	81.5	3.1
10°-20°	233.0	8.9
20°-30°	351.9	13.5
30°-40°	424.2	16.2
40°-50°	445.3	17.1
50°-60°	416.6	16.0
60°-70°	344.1	13.2
70°-80°	234.4	9.0
80°-90°	79.9	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°	666.5	25.5
0°-40°	1090.6	41.8
0°-60°	1952.6	74.8
0°-90°	2611.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2611.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	861	861	861	861	861	
5°	859	858	854	859	859	82
15°	821	822	823	832	833	231
25°	749	753	762	776	780	345
35°	651	658	676	698	705	407
45°	536	548	575	606	618	414
55°	412	428	466	504	519	367
65°	278	302	350	394	410	276
75°	144	177	230	274	289	153
85°	30	58	81	92	95	37
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	861.1	861.1	861.1	861.1	861.1
2.5°	862.0	861.1	856.8	861.1	860.2
5°	859.4	858.5	854.2	859.4	859.4
7.5°	853.3	853.3	849.0	855.0	855.9
10°	844.6	844.6	842.0	849.0	849.0
12.5°	834.2	834.2	834.2	841.2	842.0
15°	821.2	822.1	823.0	831.6	833.4
17.5°	805.6	807.4	810.0	820.4	822.1
20°	789.2	790.9	795.2	807.4	810.0
22.5°	768.4	772.7	778.8	792.6	795.2
25°	749.3	752.8	761.5	776.2	780.5
27.5°	725.9	731.1	742.4	758.0	764.1
30°	702.6	707.8	721.6	739.8	745.0
32.5°	677.4	685.2	700.0	719.0	725.1
35°	651.4	658.4	675.7	698.2	705.2
37.5°	622.9	632.4	651.4	675.7	684.4
40°	595.1	605.5	627.2	653.2	663.6
42.5°	567.4	577.8	602.1	631.5	641.9
45°	536.2	547.5	575.2	606.4	617.7
47.5°	505.0	518.9	549.2	582.1	594.3
50°	473.0	488.6	521.5	556.2	570.0
52.5°	444.4	459.1	493.8	531.0	544.0
55°	411.5	427.9	466.1	504.2	518.9
57.5°	377.7	395.9	436.6	478.2	492.9
60°	344.8	364.7	409.8	451.3	467.8
62.5°	312.7	332.7	379.4	422.7	439.2
65°	278.1	301.5	350.0	394.2	409.8
67.5°	245.2	270.3	321.4	364.7	380.3
70°	213.1	237.4	291.9	334.4	350.0
72.5°	178.5	206.2	260.8	304.9	321.4
75°	143.8	176.7	230.4	273.7	289.3
77.5°	111.8	145.5	199.2	234.8	242.6
80°	82.3	116.9	163.7	188.8	198.4
82.5°	52.8	87.5	124.7	142.9	150.7
85°	29.5	58.0	81.4	91.8	95.3
87.5°	12.1	25.1	32.9	37.3	37.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)