

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: P310155

Luminaire Tested: **24FCZ2-45-UNV-L82765-RDP-CP125-W2A-U-5700K**

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: P310155  
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: 24FCZ2-45-UNV-L82765-RDP-CP125-W2A-U-5700K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" POLYCARB SHEET  
Light Source: (168) 5700K 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: 2839.0 lumens  
Efficiency: N/A  
Efficacy: 73.4 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

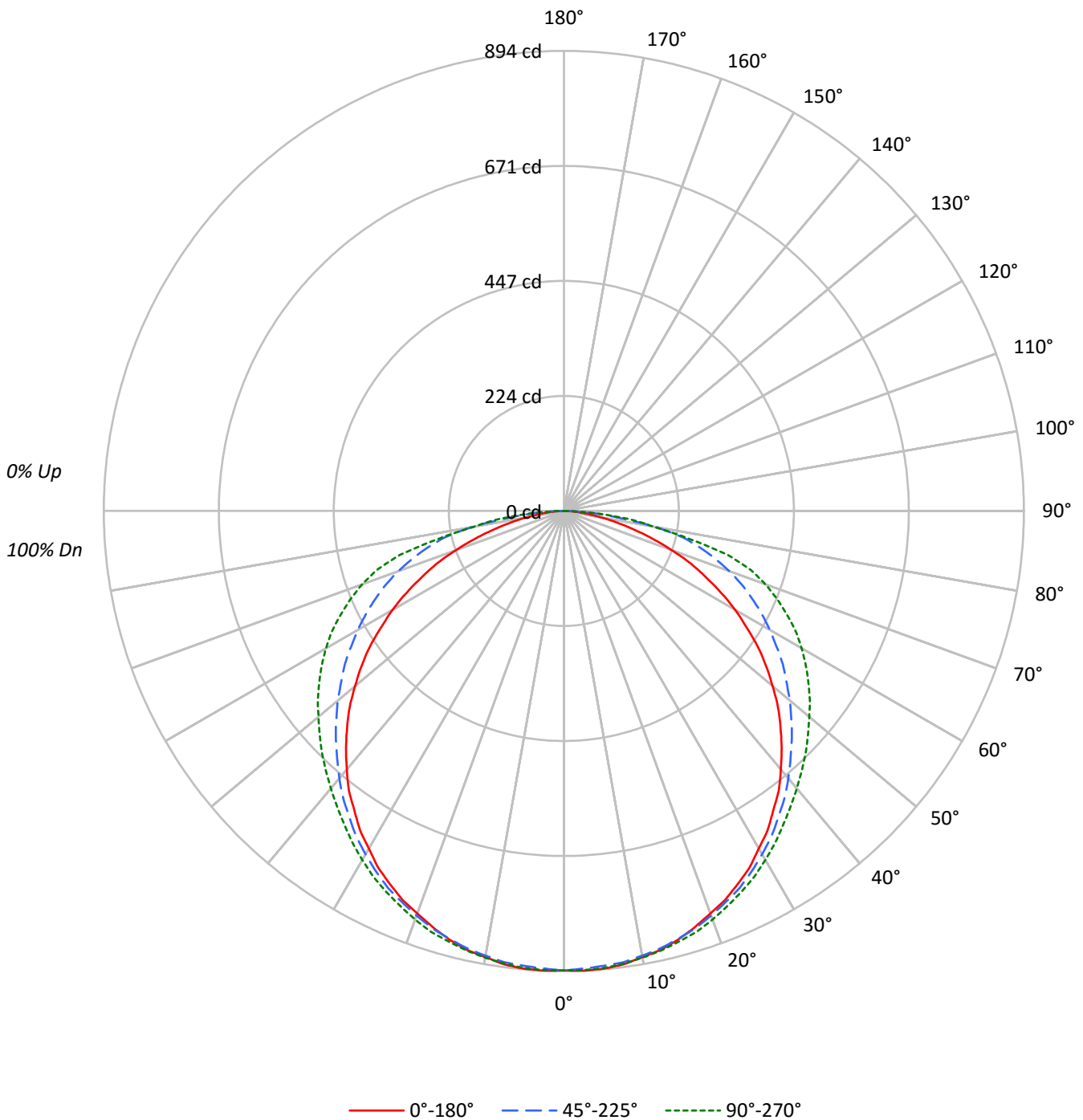
Input Watts (W): 38.7  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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°	1201	1201	1201
5°	1206	1198	1204
10°	1202	1199	1204
15°	1200	1198	1206
20°	1192	1198	1210
25°	1187	1200	1212
30°	1177	1197	1216
35°	1166	1193	1221
40°	1153	1192	1237
45°	1134	1192	1265
50°	1108	1200	1303
55°	1080	1219	1361
60°	1034	1243	1436
65°	968	1287	1524
70°	881	1346	1640
75°	747	1420	1713
80°	589	1430	1385
85°	435	1087	1218



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	84.7	3.0
10°-20°	243.7	8.6
20°-30°	372.7	13.1
30°-40°	455.6	16.0
40°-50°	485.6	17.1
50°-60°	464.3	16.4
60°-70°	393.3	13.9
70°-80°	264.4	9.3
80°-90°	74.6	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°	701.1	24.7
0°-40°	1156.8	40.7
0°-60°	2106.7	74.2
0°-90°	2839.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2839.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	893	893	893	893	893	
5°	893	891	887	891	891	85
15°	862	862	860	867	866	243
25°	800	803	808	815	817	369
35°	710	715	727	741	744	445
45°	596	606	627	653	665	459
55°	460	477	520	560	580	410
65°	304	335	404	458	479	302
75°	144	196	273	320	330	154
85°	28	58	70	76	79	35
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	892.8	892.8	892.8	892.8	892.8
2.5°	894.2	894.2	890.0	892.8	892.8
5°	892.8	891.4	887.2	891.4	891.4
7.5°	888.6	887.2	884.3	888.6	887.2
10°	880.1	880.1	877.3	881.5	881.5
12.5°	873.1	871.7	870.3	875.9	874.5
15°	861.8	861.8	860.4	867.4	866.0
17.5°	847.7	849.1	850.5	856.2	857.6
20°	832.2	835.0	836.5	844.9	844.9
22.5°	818.2	819.6	822.4	830.8	830.8
25°	799.8	802.7	808.3	815.3	816.7
27.5°	781.5	782.9	790.0	799.8	801.3
30°	757.6	761.8	770.3	781.5	782.9
32.5°	736.5	740.7	750.6	761.8	764.6
35°	709.7	715.4	726.6	740.7	743.5
37.5°	685.8	690.0	704.1	719.6	723.8
40°	656.2	664.7	678.7	697.0	704.1
42.5°	626.6	635.1	652.0	675.9	684.4
45°	595.7	605.5	626.6	653.4	664.7
47.5°	564.7	575.9	599.9	630.9	643.5
50°	529.5	543.6	573.1	608.3	622.4
52.5°	495.7	512.6	545.0	584.4	602.7
55°	460.5	477.4	519.6	560.5	580.2
57.5°	421.0	443.6	490.0	536.5	557.6
60°	384.4	405.6	461.9	512.6	533.7
62.5°	345.0	373.2	433.7	487.2	508.4
65°	304.2	335.1	404.1	457.7	478.8
67.5°	267.6	301.3	374.6	428.1	449.2
70°	223.9	266.1	342.2	395.7	416.8
72.5°	183.1	229.5	308.4	360.5	380.2
75°	143.6	195.7	273.2	319.7	329.5
77.5°	107.0	161.9	236.6	256.3	249.2
80°	76.0	129.6	184.5	174.6	178.8
82.5°	49.3	98.6	114.1	129.6	133.8
85°	28.2	57.7	70.4	76.0	78.9
87.5°	12.7	21.1	28.2	28.2	26.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)