

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: P313596

Luminaire Tested: **24FCZ2-45-UNV-L83050-RDP-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: P313596  
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-L83050-RDP-CA125-W2A-U-3500K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 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: 2777.0 lumens  
Efficiency: N/A  
Efficacy: 73.9 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

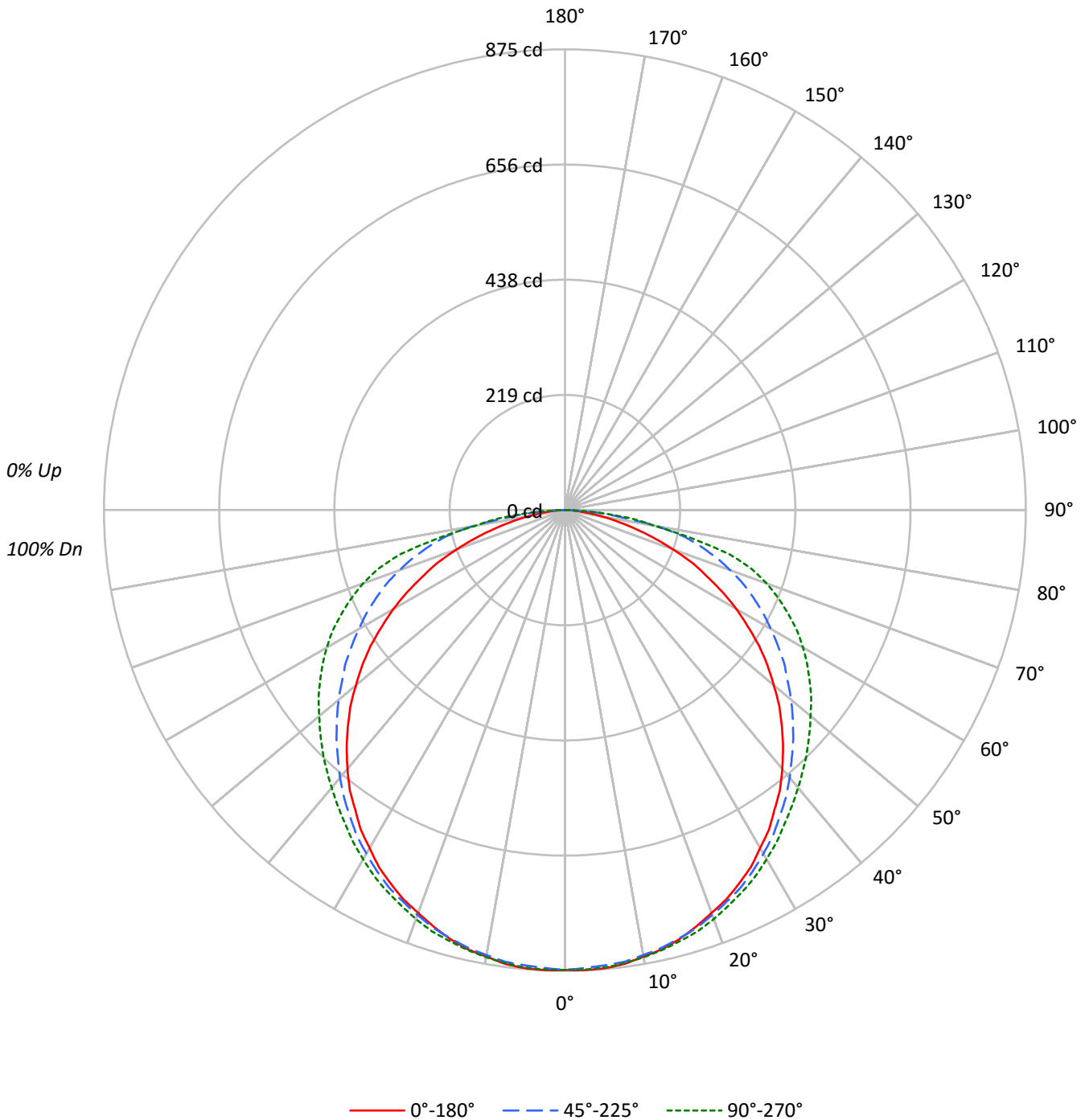
Input Watts (W): 37.6  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	1175	1175	1175
5°	1180	1172	1178
10°	1176	1172	1178
15°	1174	1172	1180
20°	1166	1172	1183
25°	1162	1174	1186
30°	1151	1171	1190
35°	1140	1168	1195
40°	1127	1166	1210
45°	1109	1166	1237
50°	1084	1173	1274
55°	1057	1192	1331
60°	1012	1216	1405
65°	947	1259	1491
70°	862	1317	1604
75°	730	1389	1675
80°	576	1398	1355
85°	425	1064	1190



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	82.8	3.0
10°-20°	238.4	8.6
20°-30°	364.6	13.1
30°-40°	445.7	16.0
40°-50°	475.0	17.1
50°-60°	454.2	16.4
60°-70°	384.7	13.9
70°-80°	258.6	9.3
80°-90°	72.9	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°	685.8	24.7
0°-40°	1131.5	40.7
0°-60°	2060.7	74.2
0°-90°	2777.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2777.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	873	873	873	873	873	
5°	873	872	868	872	872	83
15°	843	843	842	848	847	238
25°	782	785	791	798	799	361
35°	694	700	711	724	727	435
45°	583	592	613	639	650	449
55°	450	467	508	548	568	401
65°	298	328	395	448	468	295
75°	140	192	267	313	322	150
85°	28	56	69	74	77	34
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	873.3	873.3	873.3	873.3	873.3
2.5°	874.7	874.7	870.5	873.3	873.3
5°	873.3	871.9	867.8	871.9	871.9
7.5°	869.2	867.8	865.0	869.2	867.8
10°	860.9	860.9	858.1	862.3	862.3
12.5°	854.0	852.6	851.2	856.8	855.4
15°	843.0	843.0	841.6	848.5	847.1
17.5°	829.2	830.6	832.0	837.5	838.9
20°	814.1	816.8	818.2	826.5	826.5
22.5°	800.3	801.7	804.4	812.7	812.7
25°	782.4	785.1	790.6	797.5	798.9
27.5°	764.5	765.8	772.7	782.4	783.8
30°	741.1	745.2	753.5	764.5	765.8
32.5°	720.4	724.5	734.2	745.2	747.9
35°	694.2	699.7	710.8	724.5	727.3
37.5°	670.8	674.9	688.7	703.9	708.0
40°	641.9	650.1	663.9	681.8	688.7
42.5°	613.0	621.2	637.7	661.2	669.4
45°	582.7	592.3	613.0	639.1	650.1
47.5°	552.3	563.4	586.8	617.1	629.5
50°	517.9	531.7	560.6	595.0	608.8
52.5°	484.9	501.4	533.1	571.6	589.5
55°	450.4	466.9	508.3	548.2	567.5
57.5°	411.8	433.9	479.3	524.8	545.5
60°	376.0	396.7	451.8	501.4	522.0
62.5°	337.5	365.0	424.2	476.6	497.3
65°	297.5	327.8	395.3	447.7	468.3
67.5°	261.7	294.8	366.4	418.7	439.4
70°	219.0	260.3	334.7	387.1	407.7
72.5°	179.1	224.5	301.7	352.6	371.9
75°	140.5	191.5	267.2	312.7	322.3
77.5°	104.7	158.4	231.4	250.7	243.8
80°	74.4	126.7	180.4	170.8	174.9
82.5°	48.2	96.4	111.6	126.7	130.9
85°	27.5	56.5	68.9	74.4	77.1
87.5°	12.4	20.7	27.5	27.5	26.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)