

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: P313120

Luminaire Tested: **24FCZ2-35-UNV-L83050-HRP-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: P313120  
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: 24FCZ2-35-UNV-L83050-HRP-CA125-W2A-U-3000K  
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. 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**

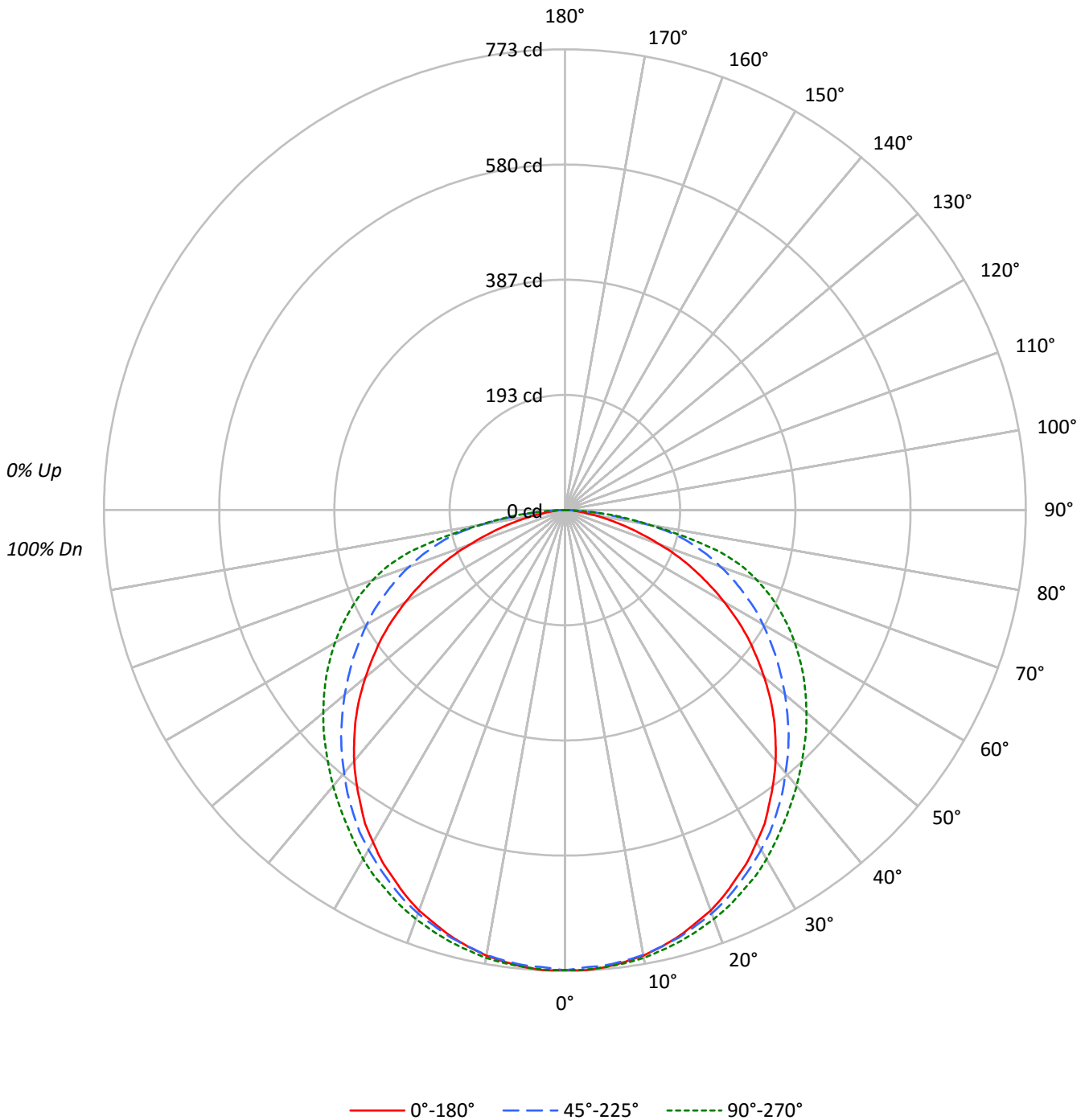
Lumens per Lamp: N/A  
Luminaire Lumens: 2379.0 lumens  
Efficiency: N/A  
Efficacy: 85.3 lumens/watt  
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 27.9  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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°	1039	1039	1039
5°	1040	1036	1040
10°	1037	1035	1042
15°	1031	1034	1043
20°	1024	1031	1045
25°	1011	1026	1047
30°	1000	1023	1051
35°	983	1018	1052
40°	966	1011	1062
45°	944	1010	1078
50°	913	1009	1107
55°	881	1016	1147
60°	831	1032	1198
65°	767	1056	1265
70°	670	1093	1348
75°	544	1149	1393
80°	401	1127	1127
85°	307	831	939



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	73.1	3.1
10°-20°	210.0	8.8
20°-30°	319.7	13.4
30°-40°	388.1	16.3
40°-50°	410.1	17.2
50°-60°	386.9	16.3
60°-70°	321.7	13.5
70°-80°	211.7	8.9
80°-90°	57.7	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°	602.8	25.3
0°-40°	990.9	41.7
0°-60°	1787.9	75.2
0°-90°	2379.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2379.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	772	772	772	772	772	
5°	770	770	767	770	770	73
15°	740	741	742	749	749	209
25°	681	685	691	703	705	314
35°	599	606	620	635	640	375
45°	496	506	531	557	567	382
55°	376	391	433	474	489	334
65°	241	269	332	380	397	238
75°	105	152	221	262	268	113
85°	20	44	54	60	61	24
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	771.9	771.9	771.9	771.9	771.9
2.5°	772.9	771.9	767.9	771.9	771.9
5°	769.9	769.9	766.9	769.9	769.9
7.5°	764.9	764.9	762.9	766.9	766.9
10°	758.9	758.9	757.9	762.9	762.9
12.5°	750.0	751.0	750.0	755.9	755.9
15°	740.0	741.0	742.0	749.0	749.0
17.5°	727.1	729.0	731.0	739.0	740.0
20°	715.1	716.1	720.1	729.0	730.0
22.5°	699.2	702.2	707.1	716.1	719.1
25°	681.2	685.2	691.2	703.1	705.1
27.5°	664.3	667.3	675.3	688.2	692.2
30°	643.4	648.4	658.3	671.3	676.3
32.5°	623.5	628.5	640.4	654.3	658.3
35°	598.6	605.5	619.5	635.4	640.4
37.5°	574.7	581.6	598.6	616.5	622.5
40°	549.8	557.7	575.7	596.6	604.5
42.5°	522.9	533.8	553.8	576.7	585.6
45°	496.0	505.9	530.8	556.7	566.7
47.5°	467.1	479.1	505.9	536.8	548.8
50°	436.2	451.2	482.0	515.9	528.9
52.5°	405.4	422.3	457.1	495.0	508.9
55°	375.5	391.4	433.2	474.1	489.0
57.5°	342.6	362.5	408.3	452.2	467.1
60°	308.7	330.7	383.4	429.3	445.2
62.5°	274.9	299.8	359.5	405.4	422.3
65°	241.0	268.9	331.7	380.5	397.4
67.5°	208.2	239.0	305.8	354.6	371.5
70°	170.3	209.2	277.9	325.7	342.6
72.5°	135.5	180.3	251.0	295.8	310.7
75°	104.6	152.4	221.1	261.9	267.9
77.5°	76.7	124.5	190.2	204.2	205.2
80°	51.8	99.6	145.4	143.4	145.4
82.5°	33.9	74.7	91.6	102.6	103.6
85°	19.9	43.8	53.8	59.8	60.8
87.5°	10.0	14.9	18.9	19.9	21.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)