

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: P310221

Luminaire Tested: **24FCZ2-50-UNV-L82765-RDP-CA08-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: P310221  
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: 24FCZ2-50-UNV-L82765-RDP-CA08-W2A-U-3000K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" 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**

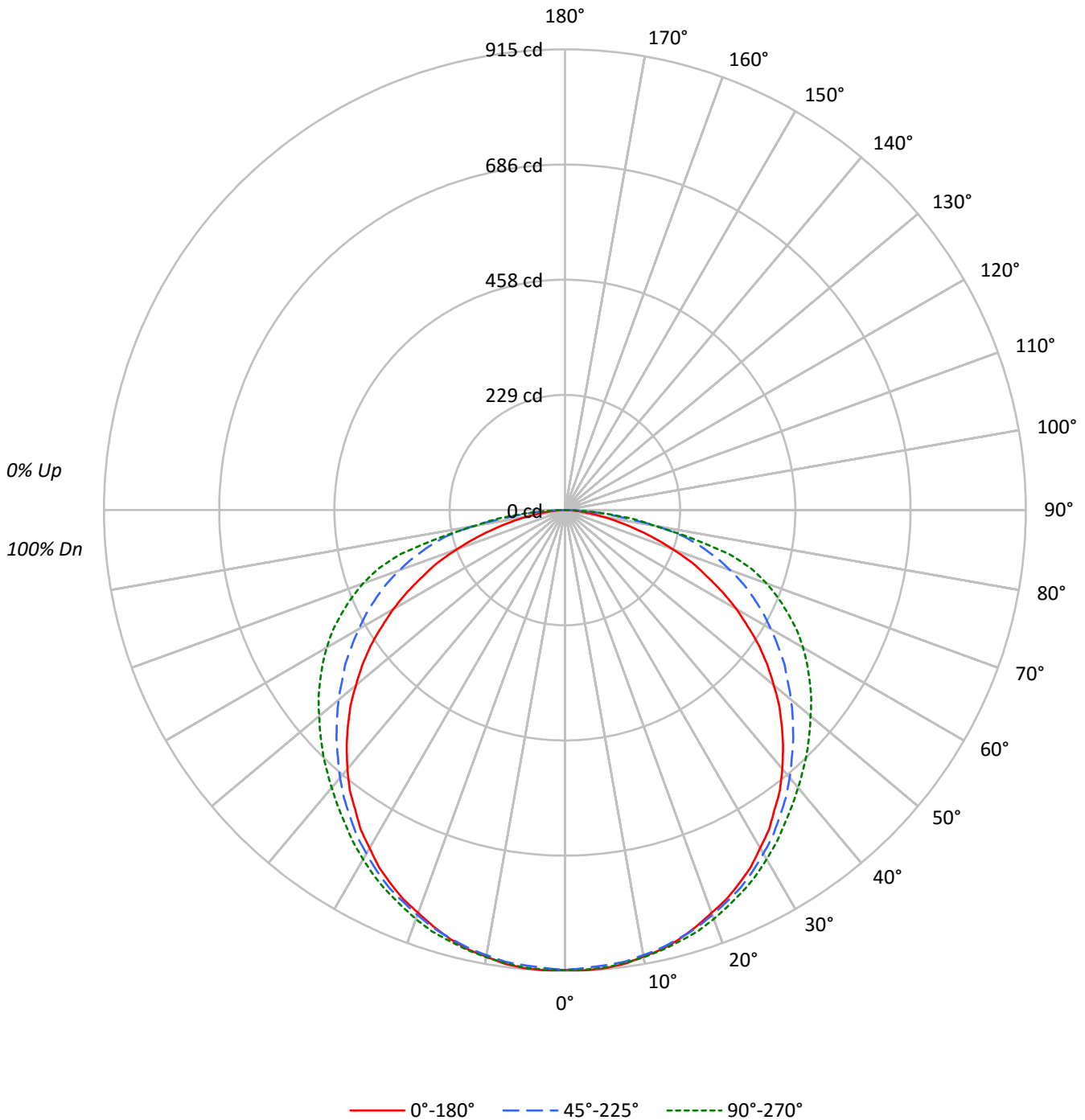
Lumens per Lamp: N/A  
Luminaire Lumens: 2904.0 lumens  
Efficiency: N/A  
Efficacy: 68.5 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 42.4  
Input Voltage (V): NR  
Input Current (A<sub>in</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	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°	1229	1229	1229
5°	1233	1226	1232
10°	1230	1226	1232
15°	1228	1226	1234
20°	1219	1225	1238
25°	1215	1227	1240
30°	1204	1224	1244
35°	1192	1221	1249
40°	1179	1219	1265
45°	1159	1220	1294
50°	1134	1227	1333
55°	1105	1247	1392
60°	1058	1271	1469
65°	990	1316	1559
70°	901	1377	1677
75°	764	1452	1752
80°	603	1462	1417
85°	445	1112	1246



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	86.6	3.0
10°-20°	249.3	8.6
20°-30°	381.3	13.1
30°-40°	466.1	16.0
40°-50°	496.7	17.1
50°-60°	475.0	16.4
60°-70°	402.3	13.9
70°-80°	270.4	9.3
80°-90°	76.3	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°	717.2	24.7
0°-40°	1183.3	40.7
0°-60°	2155.0	74.2
0°-90°	2904.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2904.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	913	913	913	913	913	
5°	913	912	908	912	912	87
15°	882	882	880	887	886	249
25°	818	821	827	834	835	377
35°	726	732	743	758	760	455
45°	609	619	641	668	680	470
55°	471	488	532	573	594	420
65°	311	343	413	468	490	309
75°	147	200	279	327	337	157
85°	29	59	72	78	81	36
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	913.2	913.2	913.2	913.2	913.2
2.5°	914.7	914.7	910.3	913.2	913.2
5°	913.2	911.8	907.5	911.8	911.8
7.5°	908.9	907.5	904.6	908.9	907.5
10°	900.3	900.3	897.4	901.7	901.7
12.5°	893.1	891.6	890.2	895.9	894.5
15°	881.5	881.5	880.1	887.3	885.9
17.5°	867.1	868.6	870.0	875.8	877.2
20°	851.3	854.2	855.6	864.3	864.3
22.5°	836.9	838.3	841.2	849.8	849.8
25°	818.2	821.0	826.8	834.0	835.4
27.5°	799.4	800.9	808.1	818.2	819.6
30°	774.9	779.3	787.9	799.4	800.9
32.5°	753.3	757.7	767.7	779.3	782.1
35°	726.0	731.7	743.3	757.7	760.5
37.5°	701.5	705.8	720.2	736.1	740.4
40°	671.2	679.9	694.3	713.0	720.2
42.5°	641.0	649.6	666.9	691.4	700.0
45°	609.3	619.4	641.0	668.4	679.9
47.5°	577.6	589.1	613.6	645.3	658.3
50°	541.6	556.0	586.3	622.3	636.7
52.5°	507.0	524.3	557.4	597.8	616.5
55°	471.0	488.3	531.5	573.3	593.5
57.5°	430.7	453.7	501.3	548.8	570.4
60°	393.2	414.8	472.5	524.3	545.9
62.5°	352.9	381.7	443.6	498.4	520.0
65°	311.1	342.8	413.4	468.1	489.7
67.5°	273.7	308.2	383.2	437.9	459.5
70°	229.0	272.2	350.0	404.8	426.4
72.5°	187.3	234.8	315.5	368.7	388.9
75°	146.9	200.2	279.4	327.0	337.1
77.5°	109.5	165.6	242.0	262.2	255.0
80°	77.8	132.5	188.7	178.6	182.9
82.5°	50.4	100.8	116.7	132.5	136.8
85°	28.8	59.1	72.0	77.8	80.7
87.5°	13.0	21.6	28.8	28.8	27.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)