

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: P310224

Luminaire Tested: **24FCZ2-50-UNV-L82765-RDP-CA08-W2A-U-4500K**

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: P310224  
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-4500K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" ACRYLIC SHEET  
Light Source: (168) 4500K 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**

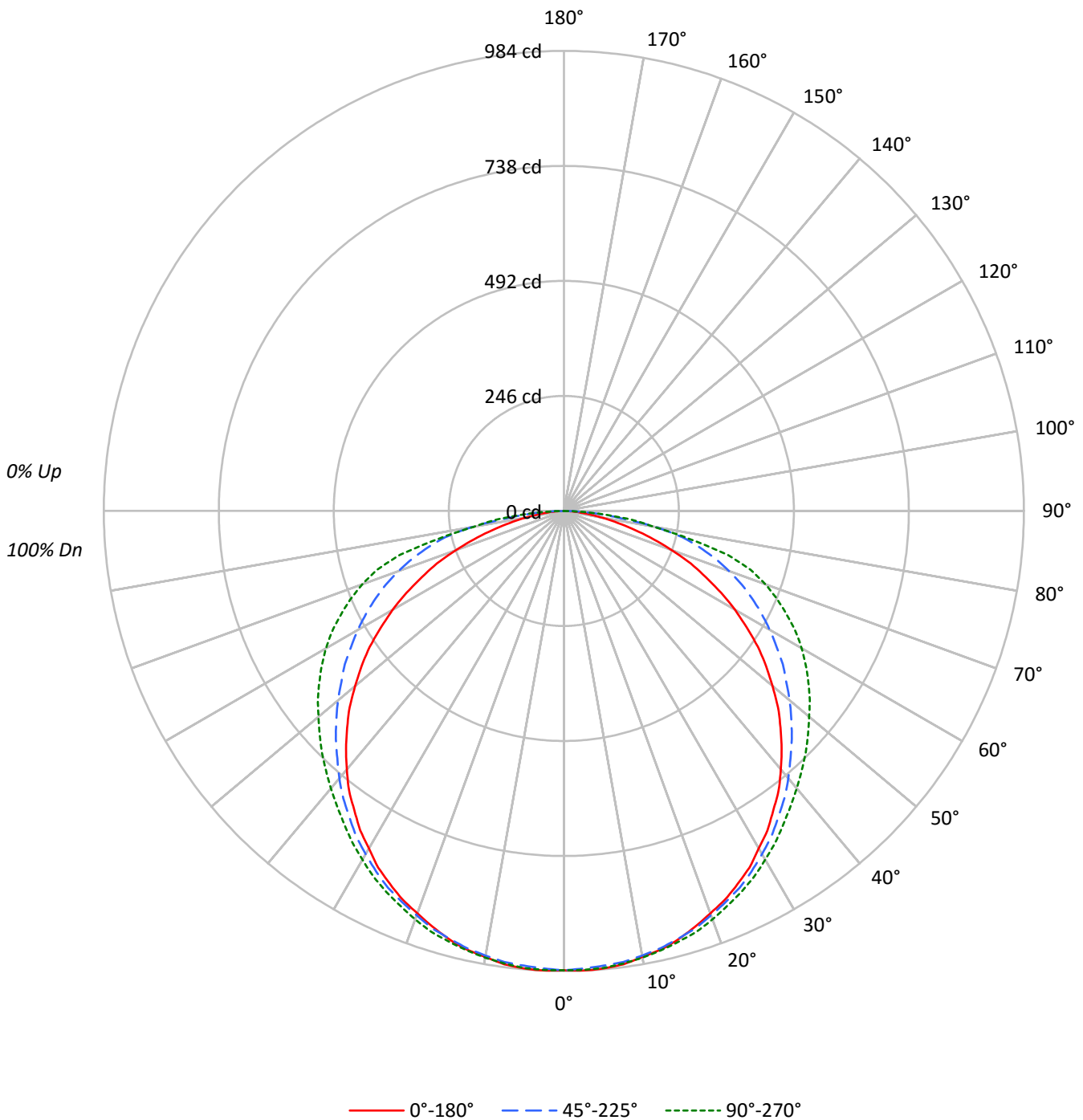
Lumens per Lamp: N/A  
Luminaire Lumens: 3124.0 lumens  
Efficiency: N/A  
Efficacy: 71.8 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 43.5  
Input Voltage (V): NR  
Input Current (Ain): NR  
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°	1322	1322	1322
5°	1327	1318	1325
10°	1323	1319	1325
15°	1321	1319	1327
20°	1311	1318	1331
25°	1307	1320	1334
30°	1295	1317	1338
35°	1283	1313	1344
40°	1268	1312	1361
45°	1247	1312	1392
50°	1220	1320	1434
55°	1189	1341	1498
60°	1138	1368	1580
65°	1066	1416	1677
70°	969	1481	1805
75°	822	1563	1885
80°	649	1573	1525
85°	479	1196	1340



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	93.2	3.0
10°-20°	268.2	8.6
20°-30°	410.1	13.1
30°-40°	501.4	16.0
40°-50°	534.4	17.1
50°-60°	510.9	16.4
60°-70°	432.8	13.9
70°-80°	290.9	9.3
80°-90°	82.1	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°	771.5	24.7
0°-40°	1272.9	40.7
0°-60°	2318.2	74.2
0°-90°	3124.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3124.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	982	982	982	982	982	
5°	982	981	976	981	981	93
15°	948	948	947	954	953	267
25°	880	883	889	897	899	406
35°	781	787	800	815	818	489
45°	656	666	690	719	731	506
55°	507	525	572	617	638	451
65°	335	369	445	504	527	332
75°	158	215	301	352	363	169
85°	31	64	78	84	87	38
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	982.4	982.4	982.4	982.4	982.4
2.5°	984.0	984.0	979.3	982.4	982.4
5°	982.4	980.9	976.2	980.9	980.9
7.5°	977.8	976.2	973.1	977.8	976.2
10°	968.5	968.5	965.4	970.0	970.0
12.5°	960.7	959.2	957.6	963.8	962.3
15°	948.3	948.3	946.8	954.5	953.0
17.5°	932.8	934.4	935.9	942.1	943.7
20°	915.8	918.9	920.4	929.7	929.7
22.5°	900.3	901.8	904.9	914.2	914.2
25°	880.1	883.2	889.4	897.2	898.7
27.5°	860.0	861.5	869.3	880.1	881.7
30°	833.7	838.3	847.6	860.0	861.5
32.5°	810.4	815.1	825.9	838.3	841.4
35°	781.0	787.2	799.6	815.1	818.2
37.5°	754.6	759.3	774.8	791.8	796.5
40°	722.1	731.4	746.9	767.0	774.8
42.5°	689.5	698.8	717.4	743.8	753.1
45°	655.5	666.3	689.5	719.0	731.4
47.5°	621.4	633.8	660.1	694.2	708.1
50°	582.6	598.1	630.7	669.4	684.9
52.5°	545.4	564.0	599.7	643.1	663.2
55°	506.7	525.3	571.8	616.7	638.4
57.5°	463.3	488.1	539.2	590.4	613.6
60°	423.0	446.3	508.2	564.0	587.3
62.5°	379.6	410.6	477.3	536.1	559.4
65°	334.7	368.8	444.7	503.6	526.8
67.5°	294.4	331.6	412.2	471.1	494.3
70°	246.4	292.9	376.5	435.4	458.7
72.5°	201.4	252.6	339.3	396.7	418.4
75°	158.1	215.4	300.6	351.7	362.6
77.5°	117.8	178.2	260.3	282.0	274.3
80°	83.7	142.6	203.0	192.1	196.8
82.5°	54.2	108.5	125.5	142.6	147.2
85°	31.0	63.5	77.5	83.7	86.8
87.5°	13.9	23.2	31.0	31.0	29.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)