

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: P310895

Luminaire Tested: **24FCZ2-50-UNV-L82765-CA08-W2A-U-2700K**

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: P310895  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-15)  
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-CA08-W2A-U-2700K  
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.08" ACRYLIC SHEET  
Light Source: (168) 2700K 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: 4197.0 lumens  
Efficiency: N/A  
Efficacy: 98.3 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

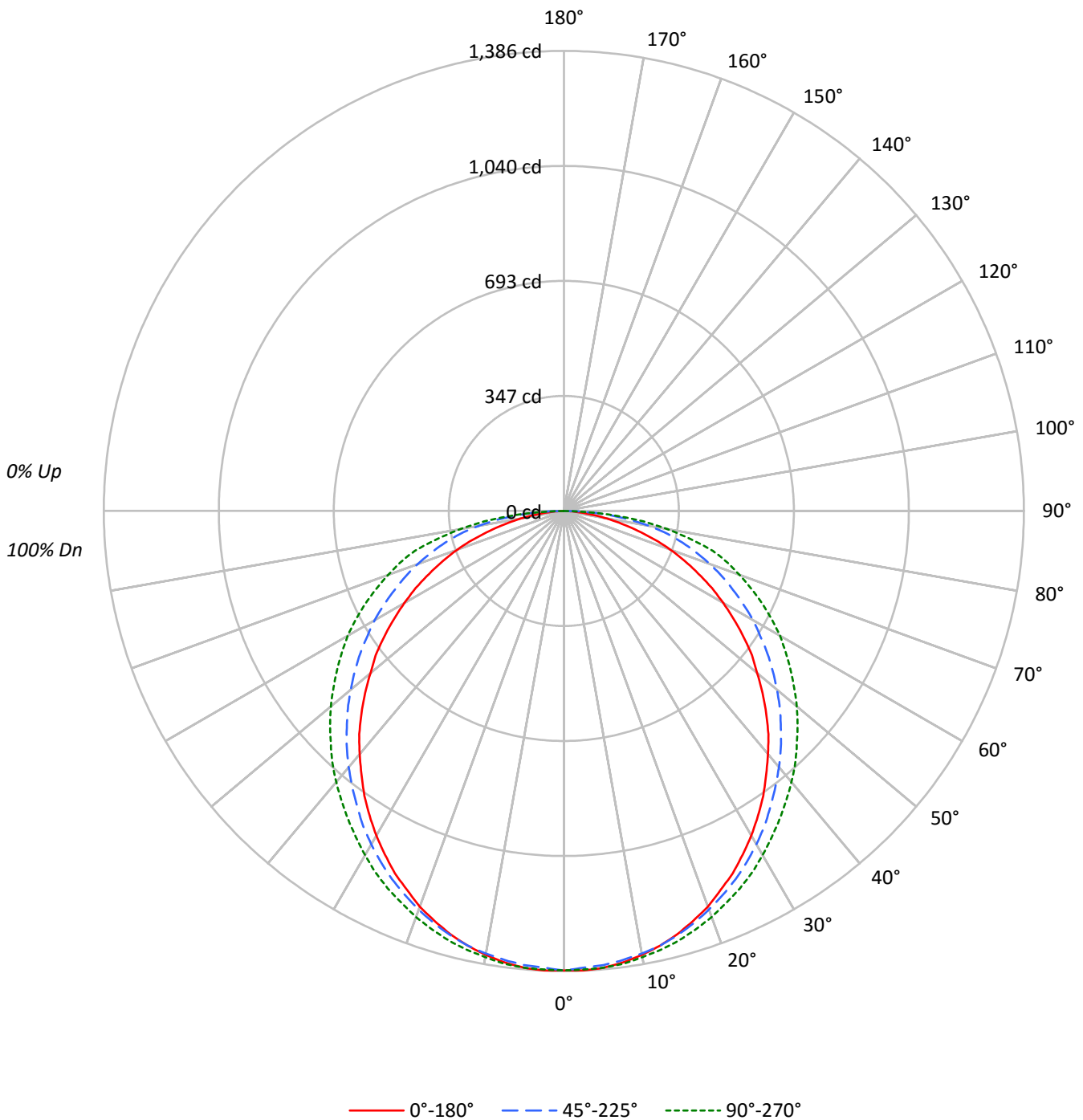
Input Watts (W): 42.7  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	92	89	92	89	87	88	86	84	82
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	79	67	58	52	64	57	51	62	56	50	60	54	50	47
5	74	61	52	45	72	60	51	44	58	50	44	56	49	43	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	64	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	37	31	57	45	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	25	35	29	24	23

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	1862	1862	1862
5°	1866	1854	1866
10°	1855	1849	1864
15°	1839	1843	1866
20°	1816	1830	1864
25°	1788	1817	1863
30°	1755	1802	1860
35°	1720	1784	1862
40°	1680	1771	1873
45°	1640	1759	1889
50°	1591	1755	1918
55°	1552	1757	1957
60°	1491	1772	2023
65°	1423	1791	2097
70°	1348	1846	2213
75°	1202	1926	2418
80°	1025	2039	2471
85°	730	2021	2365



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	131.0	3.1
10°-20°	374.6	8.9
20°-30°	565.7	13.5
30°-40°	681.8	16.2
40°-50°	715.8	17.1
50°-60°	669.7	16.0
60°-70°	553.0	13.2
70°-80°	376.9	9.0
80°-90°	128.5	3.1
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°	1071.3	25.5
0°-40°	1753.1	41.8
0°-60°	3138.6	74.8
0°-90°	4197.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4197.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1384	1384	1384	1384	1384	
5°	1381	1380	1373	1381	1381	131
15°	1320	1322	1323	1337	1340	372
25°	1204	1210	1224	1248	1255	554
35°	1047	1058	1086	1122	1134	654
45°	862	880	925	975	993	665
55°	661	688	749	810	834	590
65°	447	485	563	634	659	443
75°	231	284	370	440	465	247
85°	47	93	131	148	153	59
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1384.1	1384.1	1384.1	1384.1	1384.1
2.5°	1385.5	1384.1	1377.2	1384.1	1382.7
5°	1381.3	1380.0	1373.0	1381.3	1381.3
7.5°	1371.6	1371.6	1364.6	1374.4	1375.8
10°	1357.7	1357.7	1353.5	1364.6	1364.6
12.5°	1341.0	1341.0	1341.0	1352.1	1353.5
15°	1320.1	1321.5	1322.9	1336.8	1339.6
17.5°	1295.0	1297.8	1302.0	1318.7	1321.5
20°	1268.6	1271.3	1278.3	1297.8	1302.0
22.5°	1235.1	1242.1	1251.8	1274.1	1278.3
25°	1204.5	1210.1	1224.0	1247.7	1254.6
27.5°	1166.9	1175.3	1193.4	1218.4	1228.2
30°	1129.3	1137.7	1159.9	1189.2	1197.5
32.5°	1088.9	1101.5	1125.1	1155.8	1165.5
35°	1047.2	1058.3	1086.1	1122.3	1133.5
37.5°	1001.2	1016.5	1047.2	1086.1	1100.1
40°	956.6	973.3	1008.2	1049.9	1066.6
42.5°	912.1	928.8	967.8	1015.1	1031.8
45°	862.0	880.1	924.6	974.7	992.8
47.5°	811.8	834.1	882.8	935.8	955.2
50°	760.3	785.4	838.3	894.0	916.3
52.5°	714.3	738.0	793.7	853.6	874.5
55°	661.4	687.9	749.2	810.4	834.1
57.5°	607.1	636.4	701.8	768.7	792.3
60°	554.2	586.2	658.6	725.5	751.9
62.5°	502.7	534.7	609.9	679.5	706.0
65°	447.0	484.6	562.6	633.6	658.6
67.5°	394.1	434.5	516.6	586.2	611.3
70°	342.6	381.5	469.3	537.5	562.6
72.5°	286.9	331.4	419.1	490.2	516.6
75°	231.2	284.1	370.4	440.0	465.1
77.5°	179.6	233.9	320.3	377.4	389.9
80°	132.3	188.0	263.2	303.6	318.9
82.5°	84.9	140.6	200.5	229.8	242.3
85°	47.3	93.3	130.9	147.6	153.2
87.5°	19.5	40.4	52.9	59.9	59.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)