

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: P310903

Luminaire Tested: **24FCZ2-50-UNV-L82765-CA08-W2A-U-6500K**

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: P310903  
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-6500K  
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.08" ACRYLIC SHEET  
Light Source: (168) 6500K 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**

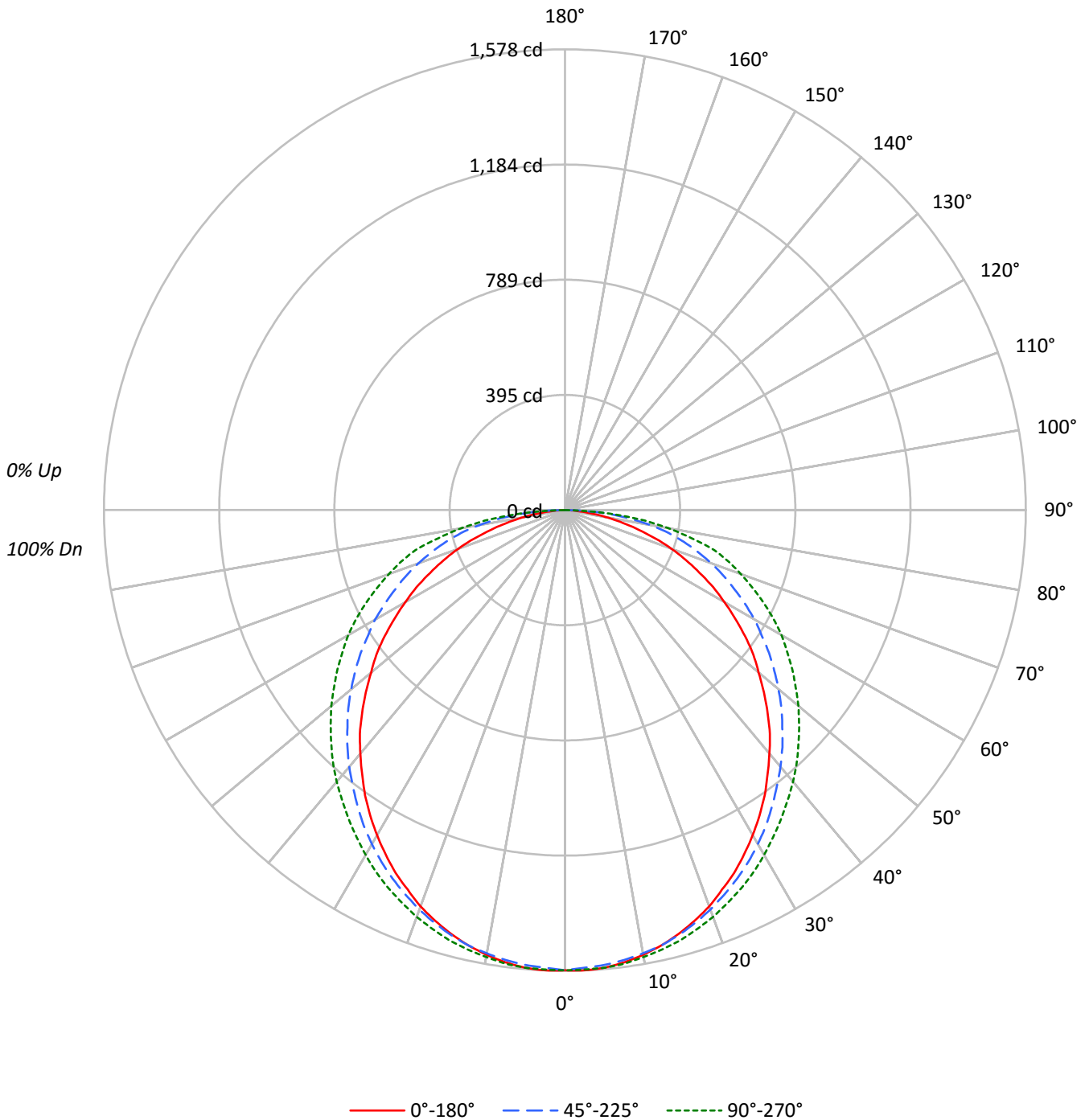
Lumens per Lamp: N/A  
Luminaire Lumens: 4780.0 lumens  
Efficiency: N/A  
Efficacy: 107.2 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 44.6  
Input Voltage (V): NR  
Input Current (A<sub>in</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°	2121	2121	2121
5°	2125	2112	2125
10°	2113	2106	2123
15°	2094	2099	2125
20°	2069	2085	2123
25°	2037	2070	2121
30°	1998	2053	2119
35°	1959	2032	2120
40°	1914	2017	2134
45°	1868	2004	2152
50°	1813	1998	2184
55°	1767	2001	2228
60°	1699	2019	2305
65°	1621	2040	2388
70°	1535	2103	2520
75°	1369	2193	2754
80°	1168	2322	2814
85°	832	2302	2694



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	149.2	3.1
10°-20°	426.6	8.9
20°-30°	644.3	13.5
30°-40°	776.5	16.2
40°-50°	815.2	17.1
50°-60°	762.7	16.0
60°-70°	629.9	13.2
70°-80°	429.2	9.0
80°-90°	146.4	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°	1220.1	25.5
0°-40°	1996.6	41.8
0°-60°	3574.6	74.8
0°-90°	4780.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4780.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1576	1576	1576	1576	1576	
5°	1573	1572	1564	1573	1573	149
15°	1504	1505	1507	1522	1526	424
25°	1372	1378	1394	1421	1429	631
35°	1193	1205	1237	1278	1291	745
45°	982	1002	1053	1110	1131	757
55°	753	783	853	923	950	672
65°	509	552	641	722	750	505
75°	263	324	422	501	530	281
85°	54	106	149	168	174	67
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1576.4	1576.4	1576.4	1576.4	1576.4
2.5°	1578.0	1576.4	1568.5	1576.4	1574.8
5°	1573.2	1571.6	1563.7	1573.2	1573.2
7.5°	1562.1	1562.1	1554.2	1565.3	1566.9
10°	1546.3	1546.3	1541.5	1554.2	1554.2
12.5°	1527.2	1527.2	1527.2	1539.9	1541.5
15°	1503.5	1505.0	1506.6	1522.5	1525.7
17.5°	1474.9	1478.1	1482.8	1501.9	1505.0
20°	1444.8	1447.9	1455.9	1478.1	1482.8
22.5°	1406.7	1414.6	1425.7	1451.1	1455.9
25°	1371.8	1378.2	1394.0	1421.0	1428.9
27.5°	1329.0	1338.5	1359.1	1387.7	1398.8
30°	1286.2	1295.7	1321.1	1354.4	1363.9
32.5°	1240.2	1254.5	1281.4	1316.3	1327.4
35°	1192.6	1205.3	1237.0	1278.2	1290.9
37.5°	1140.3	1157.7	1192.6	1237.0	1252.9
40°	1089.5	1108.6	1148.2	1195.8	1214.8
42.5°	1038.8	1057.8	1102.2	1156.1	1175.2
45°	981.7	1002.3	1053.0	1110.1	1130.8
47.5°	924.6	950.0	1005.5	1065.7	1087.9
50°	865.9	894.5	954.7	1018.2	1043.5
52.5°	813.6	840.5	904.0	972.2	996.0
55°	753.3	783.4	853.2	923.0	950.0
57.5°	691.5	724.8	799.3	875.4	902.4
60°	631.2	667.7	750.1	826.3	856.4
62.5°	572.5	609.0	694.6	773.9	804.1
65°	509.1	551.9	640.7	721.6	750.1
67.5°	448.8	494.8	588.4	667.7	696.2
70°	390.1	434.5	534.5	612.2	640.7
72.5°	326.7	377.4	477.4	558.2	588.4
75°	263.3	323.5	421.9	501.2	529.7
77.5°	204.6	266.4	364.8	429.8	444.1
80°	150.7	214.1	299.7	345.7	363.2
82.5°	96.7	160.2	228.4	261.7	275.9
85°	53.9	106.3	149.1	168.1	174.5
87.5°	22.2	46.0	60.3	68.2	68.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)