

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: P310922

Luminaire Tested: **24FCZ2-50-UNV-L82765-CP187-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: P310922
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-CP187-W2A-U-2700K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.187" POLYCARB 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: 3927.0 lumens
Efficiency: N/A
Efficacy: 92.0 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

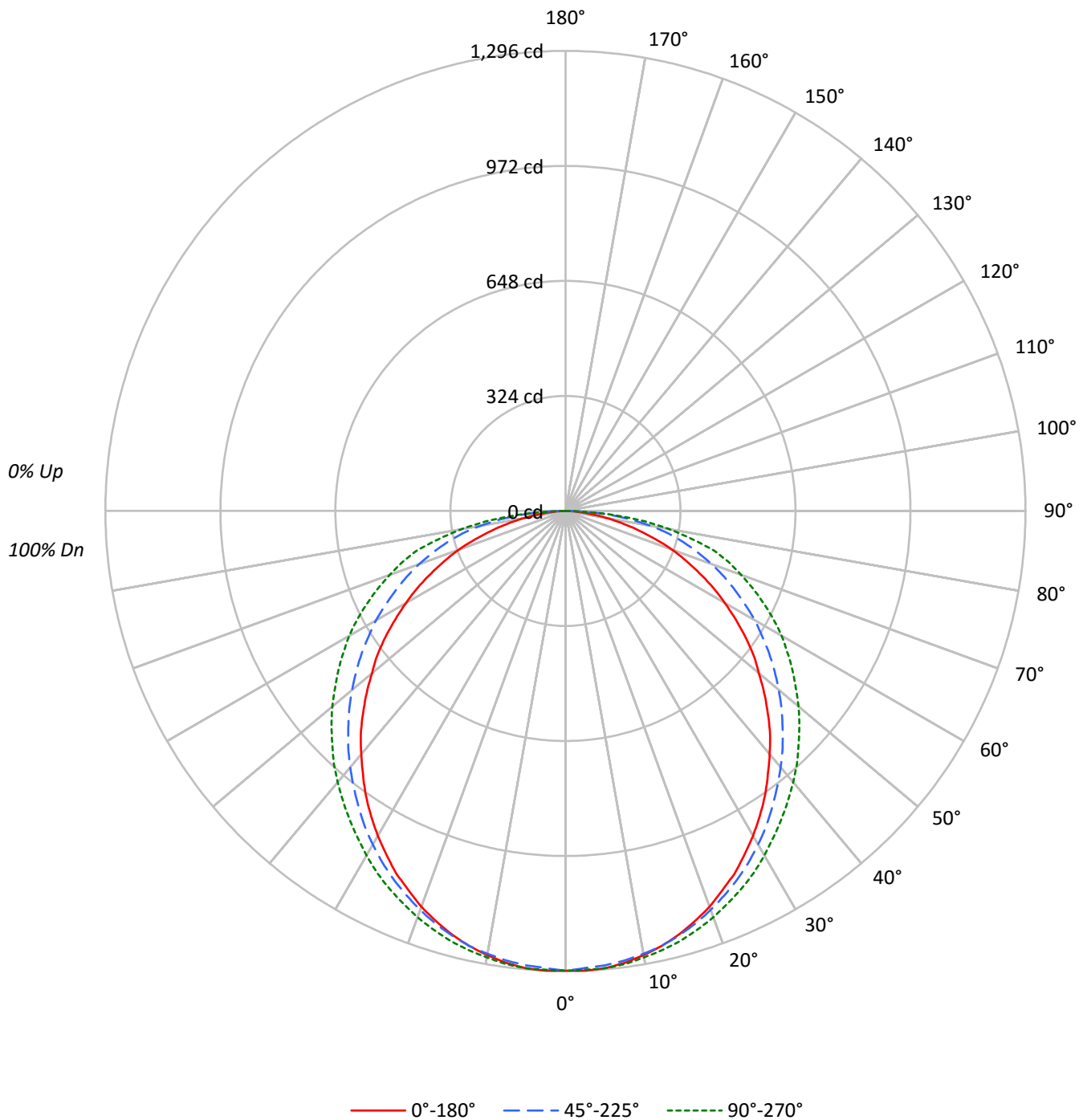
Input Watts (W): 42.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				0
RW	70	50	30	10	70	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		100
1	108	103	98	94	105	100	96	92	96	92	89		92	89	87		82
2	98	89	81	75	95	87	80	74	83	78	73		80	75	71		67
3	89	77	69	62	86	76	68	61	73	66	60		70	64	59		56
4	81	68	59	52	79	67	58	52	64	57	51		62	56	50		47
5	74	61	52	45	72	60	51	44	58	50	44		56	49	43		41
6	69	55	46	39	67	54	45	39	52	44	38		50	43	38		36
7	64	50	41	34	62	49	40	34	47	39	34		46	39	34		31
8	59	45	37	31	57	45	36	30	43	36	30		42	35	30		28
9	55	41	33	27	54	41	33	27	40	32	27		39	32	27		25
10	52	38	30	25	50	38	30	25	37	30	25		36	29	25		23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1743	1743	1743
5°	1746	1735	1746
10°	1736	1730	1744
15°	1721	1724	1746
20°	1699	1713	1744
25°	1673	1700	1743
30°	1642	1686	1741
35°	1609	1669	1742
40°	1572	1657	1753
45°	1535	1646	1768
50°	1489	1642	1795
55°	1452	1644	1831
60°	1396	1658	1893
65°	1331	1676	1962
70°	1261	1727	2071
75°	1124	1802	2262
80°	959	1908	2312
85°	684	1891	2212



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	122.6	3.1
10°-20°	350.5	8.9
20°-30°	529.3	13.5
30°-40°	638.0	16.2
40°-50°	669.7	17.1
50°-60°	626.6	16.0
60°-70°	517.5	13.2
70°-80°	352.6	9.0
80°-90°	120.3	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°	1002.4	25.5
0°-40°	1640.3	41.8
0°-60°	2936.7	74.8
0°-90°	3927.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3927.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1295	1295	1295	1295	1295	
5°	1292	1291	1285	1292	1292	123
15°	1235	1236	1238	1251	1253	348
25°	1127	1132	1145	1167	1174	519
35°	980	990	1016	1050	1061	612
45°	806	823	865	912	929	622
55°	619	644	701	758	780	552
65°	418	453	526	593	616	415
75°	216	266	347	412	435	231
85°	44	87	122	138	143	55
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1295.1	1295.1	1295.1	1295.1	1295.1
2.5°	1296.4	1295.1	1288.6	1295.1	1293.8
5°	1292.5	1291.2	1284.7	1292.5	1292.5
7.5°	1283.4	1283.4	1276.8	1286.0	1287.3
10°	1270.3	1270.3	1266.4	1276.8	1276.8
12.5°	1254.7	1254.7	1254.7	1265.1	1266.4
15°	1235.2	1236.5	1237.8	1250.8	1253.4
17.5°	1211.7	1214.3	1218.2	1233.9	1236.5
20°	1186.9	1189.6	1196.1	1214.3	1218.2
22.5°	1155.7	1162.2	1171.3	1192.2	1196.1
25°	1127.0	1132.2	1145.3	1167.4	1173.9
27.5°	1091.8	1099.7	1116.6	1140.0	1149.2
30°	1056.7	1064.5	1085.3	1112.7	1120.5
32.5°	1018.9	1030.6	1052.7	1081.4	1090.5
35°	979.8	990.2	1016.3	1050.1	1060.6
37.5°	936.8	951.1	979.8	1016.3	1029.3
40°	895.1	910.7	943.3	982.4	998.0
42.5°	853.4	869.0	905.5	949.8	965.5
45°	806.5	823.4	865.1	912.0	929.0
47.5°	759.6	780.4	826.0	875.6	893.8
50°	711.4	734.8	784.4	836.5	857.3
52.5°	668.4	690.5	742.7	798.7	818.2
55°	618.9	643.6	701.0	758.3	780.4
57.5°	568.1	595.4	656.7	719.2	741.4
60°	518.6	548.5	616.3	678.8	703.6
62.5°	470.3	500.3	570.7	635.8	660.6
65°	418.2	453.4	526.4	592.8	616.3
67.5°	368.7	406.5	483.4	548.5	572.0
70°	320.5	357.0	439.1	502.9	526.4
72.5°	268.4	310.1	392.2	458.6	483.4
75°	216.3	265.8	346.6	411.7	435.2
77.5°	168.1	218.9	299.7	353.1	364.8
80°	123.8	175.9	246.2	284.0	298.4
82.5°	79.5	131.6	187.6	215.0	226.7
85°	44.3	87.3	122.5	138.1	143.3
87.5°	18.2	37.8	49.5	56.0	56.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)