

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: P310929

Luminaire Tested: **24FCZ2-50-UNV-L82765-CP187-W2A-U-5700K**

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: P310929
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-5700K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.187" POLYCARB SHEET
Light Source: (168) 5700K 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: 4461.0 lumens
Efficiency: N/A
Efficacy: 101.6 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

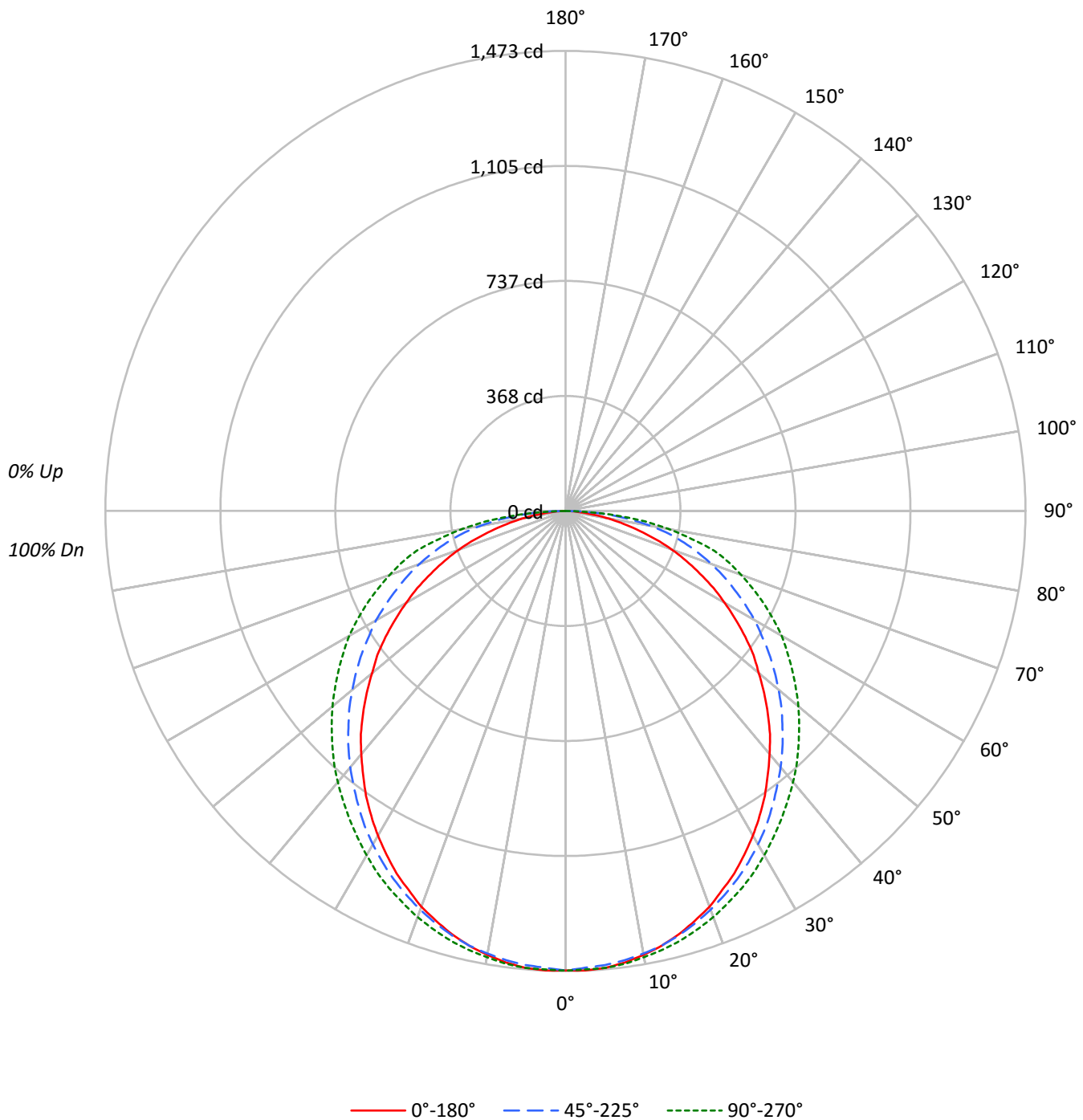
Input Watts (W): 43.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1979	1979	1979
5°	1983	1971	1983
10°	1972	1965	1982
15°	1954	1959	1983
20°	1931	1945	1982
25°	1901	1931	1980
30°	1865	1915	1978
35°	1828	1896	1979
40°	1786	1882	1991
45°	1743	1870	2008
50°	1692	1865	2039
55°	1649	1868	2080
60°	1585	1884	2151
65°	1513	1904	2229
70°	1432	1962	2353
75°	1277	2047	2570
80°	1089	2167	2626
85°	777	2147	2513



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	139.2	3.1
10°-20°	398.1	8.9
20°-30°	601.3	13.5
30°-40°	724.7	16.2
40°-50°	760.8	17.1
50°-60°	711.8	16.0
60°-70°	587.8	13.2
70°-80°	400.5	9.0
80°-90°	136.6	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°	1138.7	25.5
0°-40°	1863.4	41.8
0°-60°	3336.0	74.8
0°-90°	4461.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4461.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1471	1471	1471	1471	1471	
5°	1468	1467	1459	1468	1468	139
15°	1403	1405	1406	1421	1424	396
25°	1280	1286	1301	1326	1334	589
35°	1113	1125	1154	1193	1205	696
45°	916	935	983	1036	1055	707
55°	703	731	796	861	887	627
65°	475	515	598	673	700	471
75°	246	302	394	468	494	262
85°	50	99	139	157	163	63
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1471.2	1471.2	1471.2	1471.2	1471.2
2.5°	1472.7	1471.2	1463.8	1471.2	1469.7
5°	1468.2	1466.8	1459.4	1468.2	1468.2
7.5°	1457.9	1457.9	1450.5	1460.8	1462.3
10°	1443.1	1443.1	1438.6	1450.5	1450.5
12.5°	1425.3	1425.3	1425.3	1437.2	1438.6
15°	1403.1	1404.6	1406.1	1420.9	1423.8
17.5°	1376.5	1379.4	1383.9	1401.6	1404.6
20°	1348.4	1351.3	1358.7	1379.4	1383.9
22.5°	1312.8	1320.2	1330.6	1354.3	1358.7
25°	1280.3	1286.2	1301.0	1326.2	1333.6
27.5°	1240.3	1249.2	1268.4	1295.1	1305.4
30°	1200.3	1209.2	1232.9	1264.0	1272.9
32.5°	1157.4	1170.7	1195.9	1228.5	1238.8
35°	1113.0	1124.9	1154.5	1192.9	1204.8
37.5°	1064.2	1080.5	1113.0	1154.5	1169.3
40°	1016.8	1034.6	1071.6	1116.0	1133.7
42.5°	969.5	987.2	1028.7	1079.0	1096.7
45°	916.2	935.4	982.8	1036.1	1055.3
47.5°	862.9	886.6	938.4	994.6	1015.3
50°	808.1	834.8	891.0	950.2	973.9
52.5°	759.3	784.4	843.6	907.3	929.5
55°	703.0	731.2	796.3	861.4	886.6
57.5°	645.3	676.4	746.0	817.0	842.2
60°	589.1	623.1	700.1	771.1	799.2
62.5°	534.3	568.4	648.3	722.3	750.4
65°	475.1	515.1	598.0	673.4	700.1
67.5°	418.9	461.8	549.1	623.1	649.8
70°	364.1	405.5	498.8	571.3	598.0
72.5°	304.9	352.3	445.5	521.0	549.1
75°	245.7	301.9	393.7	467.7	494.3
77.5°	190.9	248.7	340.4	401.1	414.4
80°	140.6	199.8	279.7	322.7	338.9
82.5°	90.3	149.5	213.1	244.2	257.5
85°	50.3	99.2	139.1	156.9	162.8
87.5°	20.7	42.9	56.2	63.6	63.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)