

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: P314030

Luminaire Tested: **24FCZ2-50-UNV-L83050-CP187-W2A-U-3000K**

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: P314030
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-L83050-CP187-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.187" POLYCARB SHEET
Light Source: (168) 3000K 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

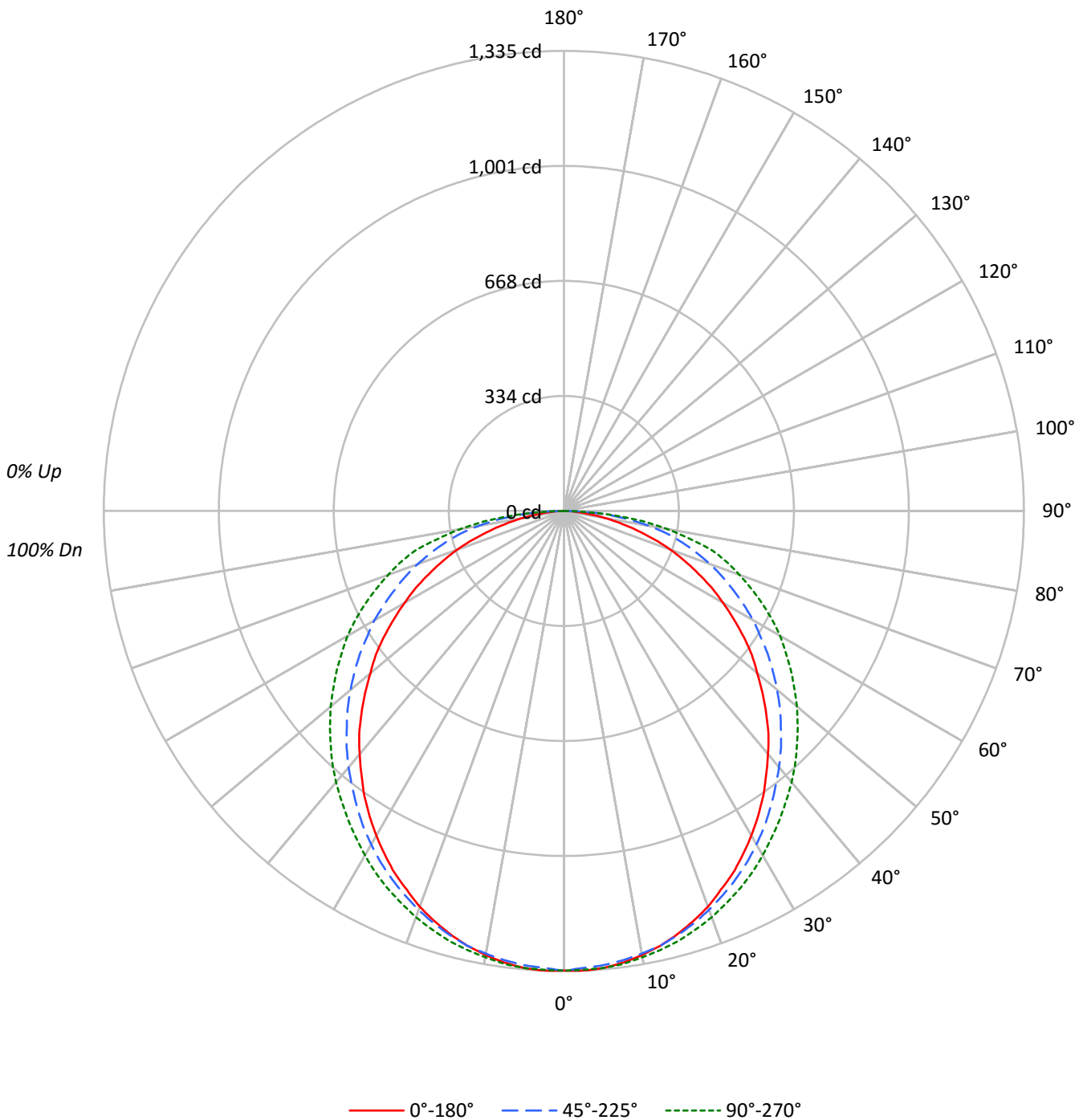
Lumens per Lamp: N/A
Luminaire Lumens: 4044.0 lumens
Efficiency: N/A
Efficacy: 94.9 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 42.6
Input Voltage (V): NR
Input Current (A_{in}): 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°	1794	1794	1794
5°	1798	1787	1798
10°	1787	1782	1796
15°	1772	1775	1798
20°	1750	1764	1796
25°	1723	1751	1795
30°	1691	1737	1793
35°	1657	1719	1794
40°	1619	1706	1805
45°	1580	1695	1820
50°	1533	1691	1848
55°	1495	1693	1885
60°	1437	1708	1950
65°	1371	1726	2020
70°	1299	1779	2133
75°	1158	1855	2329
80°	988	1965	2381
85°	704	1947	2279



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	126.2	3.1
10°-20°	360.9	8.9
20°-30°	545.1	13.5
30°-40°	657.0	16.2
40°-50°	689.7	17.1
50°-60°	645.3	16.0
60°-70°	532.9	13.2
70°-80°	363.1	9.0
80°-90°	123.8	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°	1032.2	25.5
0°-40°	1689.2	41.8
0°-60°	3024.2	74.8
0°-90°	4044.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4044.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1334	1334	1334	1334	1334	
5°	1331	1330	1323	1331	1331	126
15°	1272	1273	1275	1288	1291	359
25°	1161	1166	1179	1202	1209	534
35°	1009	1020	1046	1081	1092	631
45°	830	848	891	939	957	641
55°	637	663	722	781	804	569
65°	431	467	542	610	635	427
75°	223	274	357	424	448	238
85°	46	90	126	142	148	57
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1333.7	1333.7	1333.7	1333.7	1333.7
2.5°	1335.0	1333.7	1327.0	1333.7	1332.3
5°	1331.0	1329.7	1322.9	1331.0	1331.0
7.5°	1321.6	1321.6	1314.9	1324.3	1325.6
10°	1308.2	1308.2	1304.2	1314.9	1314.9
12.5°	1292.1	1292.1	1292.1	1302.8	1304.2
15°	1272.0	1273.3	1274.6	1288.1	1290.7
17.5°	1247.8	1250.5	1254.5	1270.6	1273.3
20°	1222.3	1225.0	1231.7	1250.5	1254.5
22.5°	1190.1	1196.8	1206.2	1227.7	1231.7
25°	1160.6	1166.0	1179.4	1202.2	1208.9
27.5°	1124.4	1132.4	1149.9	1174.0	1183.4
30°	1088.1	1096.2	1117.7	1145.8	1153.9
32.5°	1049.2	1061.3	1084.1	1113.6	1123.0
35°	1009.0	1019.7	1046.5	1081.4	1092.2
37.5°	964.7	979.5	1009.0	1046.5	1060.0
40°	921.8	937.9	971.4	1011.7	1027.8
42.5°	878.8	894.9	932.5	978.1	994.2
45°	830.5	848.0	890.9	939.2	956.7
47.5°	782.2	803.7	850.7	901.6	920.4
50°	732.6	756.7	807.7	861.4	882.9
52.5°	688.3	711.1	764.8	822.5	842.6
55°	637.3	662.8	721.8	780.9	803.7
57.5°	585.0	613.2	676.2	740.6	763.4
60°	534.0	564.9	634.6	699.0	724.5
62.5°	484.4	515.2	587.7	654.8	680.3
65°	430.7	466.9	542.1	610.5	634.6
67.5°	379.7	418.6	497.8	564.9	589.0
70°	330.1	367.6	452.2	517.9	542.1
72.5°	276.4	319.3	403.9	472.3	497.8
75°	222.7	273.7	356.9	424.0	448.1
77.5°	173.1	225.4	308.6	363.6	375.7
80°	127.5	181.1	253.6	292.5	307.3
82.5°	81.8	135.5	193.2	221.4	233.5
85°	45.6	89.9	126.1	142.2	147.6
87.5°	18.8	38.9	51.0	57.7	57.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)