

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: P314021

Luminaire Tested: **24FCZ2-50-UNV-L83050-CA125-W2A-U-3500K**

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: P314021
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-CA125-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" ACRYLIC SHEET
Light Source: (168) 3500K 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: 4557.0 lumens
Efficiency: N/A
Efficacy: 106.7 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

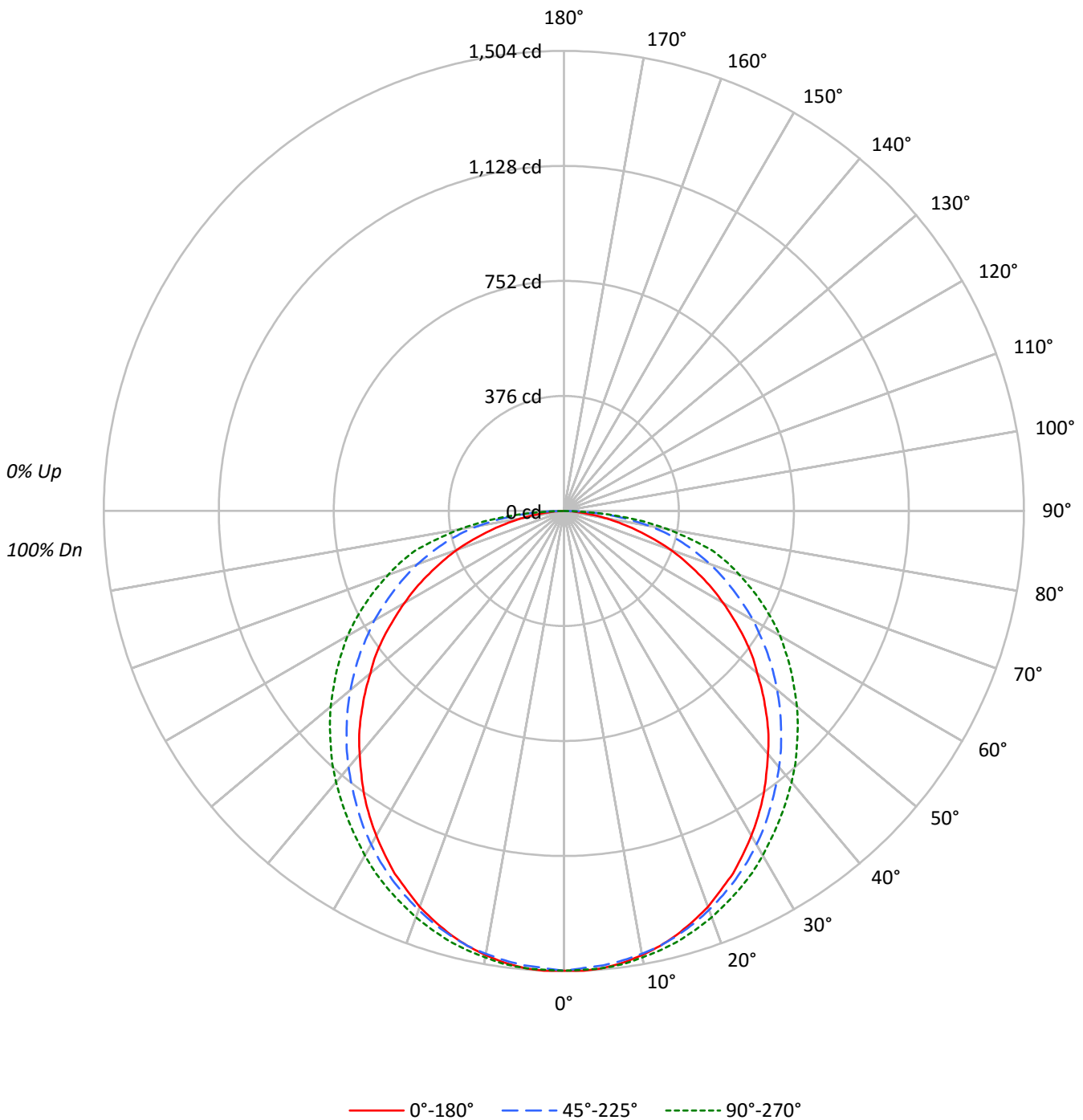
Input Watts (W): 42.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2022	2022	2022
5°	2026	2014	2026
10°	2014	2008	2024
15°	1997	2001	2026
20°	1972	1987	2024
25°	1942	1973	2022
30°	1905	1957	2020
35°	1868	1937	2021
40°	1824	1923	2034
45°	1781	1910	2051
50°	1728	1905	2083
55°	1685	1908	2124
60°	1619	1924	2197
65°	1545	1945	2277
70°	1463	2004	2403
75°	1305	2091	2625
80°	1113	2214	2682
85°	794	2194	2567



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	142.2	3.1
10°-20°	406.7	8.9
20°-30°	614.3	13.5
30°-40°	740.3	16.2
40°-50°	777.2	17.1
50°-60°	727.1	16.0
60°-70°	600.5	13.2
70°-80°	409.2	9.0
80°-90°	139.5	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°	1163.2	25.5
0°-40°	1903.5	41.8
0°-60°	3407.8	74.8
0°-90°	4557.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4557.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1503	1503	1503	1503	1503	
5°	1500	1498	1491	1500	1500	142
15°	1433	1435	1436	1452	1454	404
25°	1308	1314	1329	1355	1362	602
35°	1137	1149	1179	1219	1231	711
45°	936	956	1004	1058	1078	722
55°	718	747	813	880	906	641
65°	485	526	611	688	715	481
75°	251	308	402	478	505	268
85°	51	101	142	160	166	64
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1502.9	1502.9	1502.9	1502.9	1502.9
2.5°	1504.4	1502.9	1495.3	1502.9	1501.3
5°	1499.8	1498.3	1490.8	1499.8	1499.8
7.5°	1489.3	1489.3	1481.7	1492.3	1493.8
10°	1474.1	1474.1	1469.6	1481.7	1481.7
12.5°	1456.0	1456.0	1456.0	1468.1	1469.6
15°	1433.3	1434.8	1436.3	1451.5	1454.5
17.5°	1406.1	1409.1	1413.7	1431.8	1434.8
20°	1377.4	1380.4	1388.0	1409.1	1413.7
22.5°	1341.1	1348.6	1359.2	1383.4	1388.0
25°	1307.8	1313.9	1329.0	1354.7	1362.2
27.5°	1267.0	1276.1	1295.7	1322.9	1333.5
30°	1226.2	1235.2	1259.4	1291.2	1300.3
32.5°	1182.3	1195.9	1221.6	1254.9	1265.5
35°	1137.0	1149.1	1179.3	1218.6	1230.7
37.5°	1087.1	1103.7	1137.0	1179.3	1194.4
40°	1038.7	1056.8	1094.6	1140.0	1158.1
42.5°	990.3	1008.5	1050.8	1102.2	1120.3
45°	935.9	955.5	1003.9	1058.4	1078.0
47.5°	881.5	905.6	958.6	1016.0	1037.2
50°	825.5	852.7	910.2	970.7	994.9
52.5°	775.6	801.3	861.8	926.8	949.5
55°	718.2	746.9	813.4	879.9	905.6
57.5°	659.2	691.0	762.0	834.6	860.3
60°	601.7	636.5	715.1	787.7	816.4
62.5°	545.8	580.6	662.2	737.8	766.5
65°	485.3	526.2	610.8	687.9	715.1
67.5°	427.9	471.7	560.9	636.5	663.7
70°	371.9	414.3	509.5	583.6	610.8
72.5°	311.5	359.8	455.1	532.2	560.9
75°	251.0	308.4	402.2	477.8	505.0
77.5°	195.0	254.0	347.7	409.7	423.3
80°	143.6	204.1	285.8	329.6	346.2
82.5°	92.2	152.7	217.7	249.5	263.1
85°	51.4	101.3	142.1	160.3	166.3
87.5°	21.2	43.8	57.5	65.0	65.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)