

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: P310904

Luminaire Tested: **24FCZ2-50-UNV-L82765-CA125-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: P310904
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-CA125-W2A-U-2700K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" ACRYLIC 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: 4182.0 lumens
Efficiency: N/A
Efficacy: 97.9 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

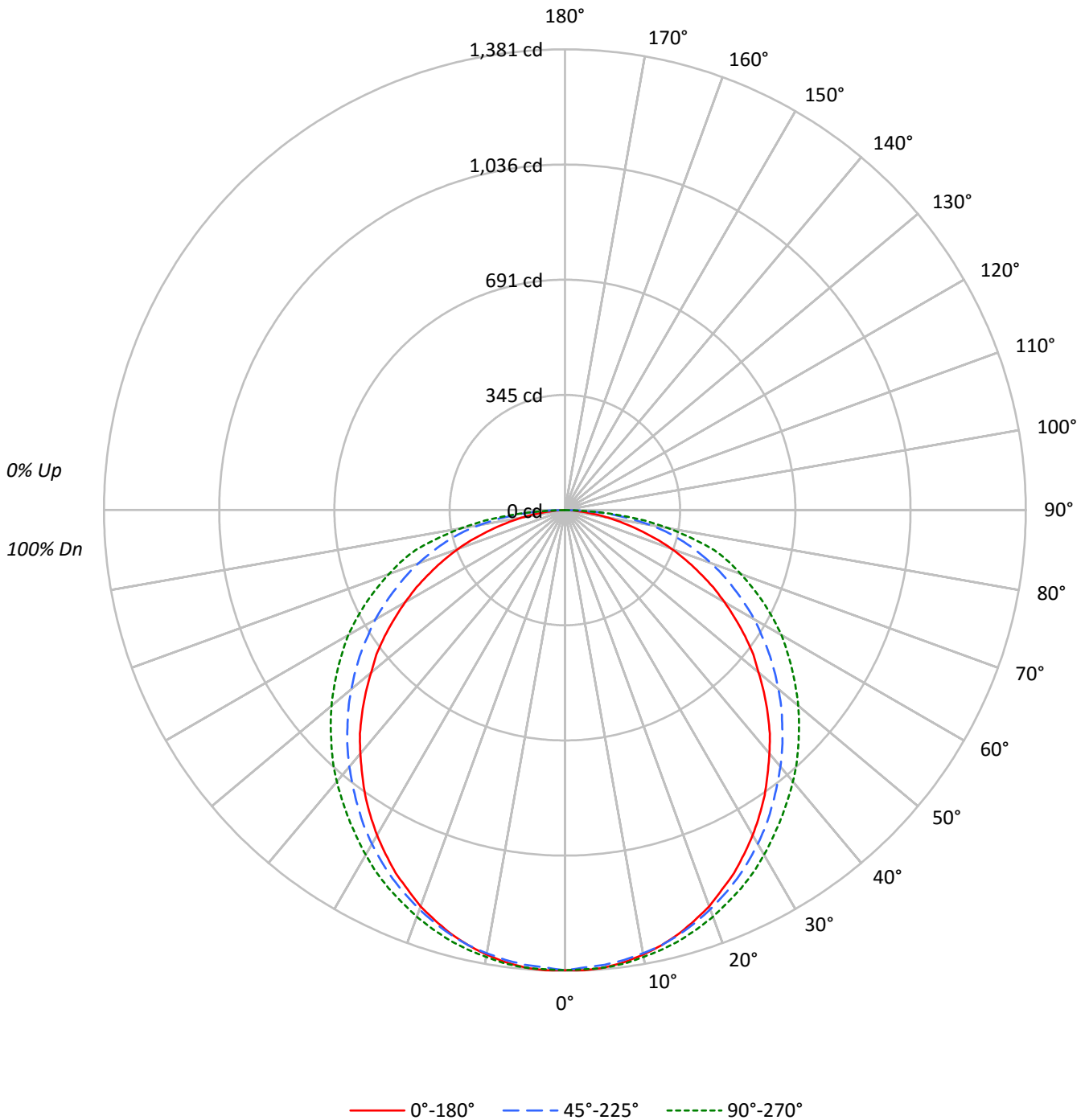
Input Watts (W): 42.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1856	1856	1856
5°	1859	1848	1859
10°	1848	1843	1858
15°	1832	1836	1859
20°	1810	1824	1858
25°	1782	1811	1856
30°	1748	1796	1854
35°	1714	1778	1855
40°	1674	1764	1867
45°	1634	1753	1882
50°	1586	1748	1911
55°	1546	1751	1950
60°	1486	1766	2016
65°	1418	1785	2089
70°	1343	1840	2205
75°	1197	1919	2409
80°	1021	2032	2462
85°	729	2013	2356



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	130.5	3.1
10°-20°	373.2	8.9
20°-30°	563.7	13.5
30°-40°	679.4	16.2
40°-50°	713.3	17.1
50°-60°	667.3	16.0
60°-70°	551.1	13.2
70°-80°	375.5	9.0
80°-90°	128.1	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°	1067.5	25.5
0°-40°	1746.8	41.8
0°-60°	3127.4	74.8
0°-90°	4182.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4182.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1379	1379	1379	1379	1379	
5°	1376	1375	1368	1376	1376	131
15°	1315	1317	1318	1332	1335	371
25°	1200	1206	1220	1243	1250	552
35°	1043	1054	1082	1118	1129	652
45°	859	877	921	971	989	662
55°	659	685	746	808	831	588
65°	445	483	561	631	656	442
75°	230	283	369	438	463	246
85°	47	93	130	147	153	59
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1379.2	1379.2	1379.2	1379.2	1379.2
2.5°	1380.6	1379.2	1372.2	1379.2	1377.8
5°	1376.4	1375.0	1368.1	1376.4	1376.4
7.5°	1366.7	1366.7	1359.8	1369.5	1370.9
10°	1352.8	1352.8	1348.7	1359.8	1359.8
12.5°	1336.2	1336.2	1336.2	1347.3	1348.7
15°	1315.4	1316.7	1318.1	1332.0	1334.8
17.5°	1290.4	1293.2	1297.3	1314.0	1316.7
20°	1264.0	1266.8	1273.7	1293.2	1297.3
22.5°	1230.7	1237.7	1247.4	1269.6	1273.7
25°	1200.2	1205.7	1219.6	1243.2	1250.1
27.5°	1162.7	1171.1	1189.1	1214.1	1223.8
30°	1125.3	1133.6	1155.8	1184.9	1193.3
32.5°	1085.0	1097.5	1121.1	1151.6	1161.3
35°	1043.4	1054.5	1082.3	1118.3	1129.4
37.5°	997.6	1012.9	1043.4	1082.3	1096.1
40°	953.2	969.9	1004.6	1046.2	1062.8
42.5°	908.8	925.5	964.3	1011.5	1028.1
45°	858.9	876.9	921.3	971.3	989.3
47.5°	808.9	831.1	879.7	932.4	951.8
50°	757.6	782.6	835.3	890.8	913.0
52.5°	711.8	735.4	790.9	850.5	871.4
55°	659.1	685.4	746.5	807.5	831.1
57.5°	605.0	634.1	699.3	765.9	789.5
60°	552.2	584.1	656.3	722.9	749.3
62.5°	500.9	532.8	607.7	677.1	703.5
65°	445.4	482.9	560.6	631.3	656.3
67.5°	392.7	432.9	514.8	584.1	609.1
70°	341.3	380.2	467.6	535.6	560.6
72.5°	285.8	330.2	417.6	488.4	514.8
75°	230.3	283.1	369.1	438.5	463.4
77.5°	179.0	233.1	319.1	376.0	388.5
80°	131.8	187.3	262.2	302.5	317.7
82.5°	84.6	140.1	199.8	228.9	241.4
85°	47.2	93.0	130.4	147.1	152.6
87.5°	19.4	40.2	52.7	59.7	59.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)