

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: P310821

Luminaire Tested: **24FCZ2-45-UNV-L82765-CA125-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: P310821
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: 24FCZ2-45-UNV-L82765-CA125-W2A-U-5700K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" ACRYLIC 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: 4305.0 lumens
Efficiency: N/A
Efficacy: 111.2 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

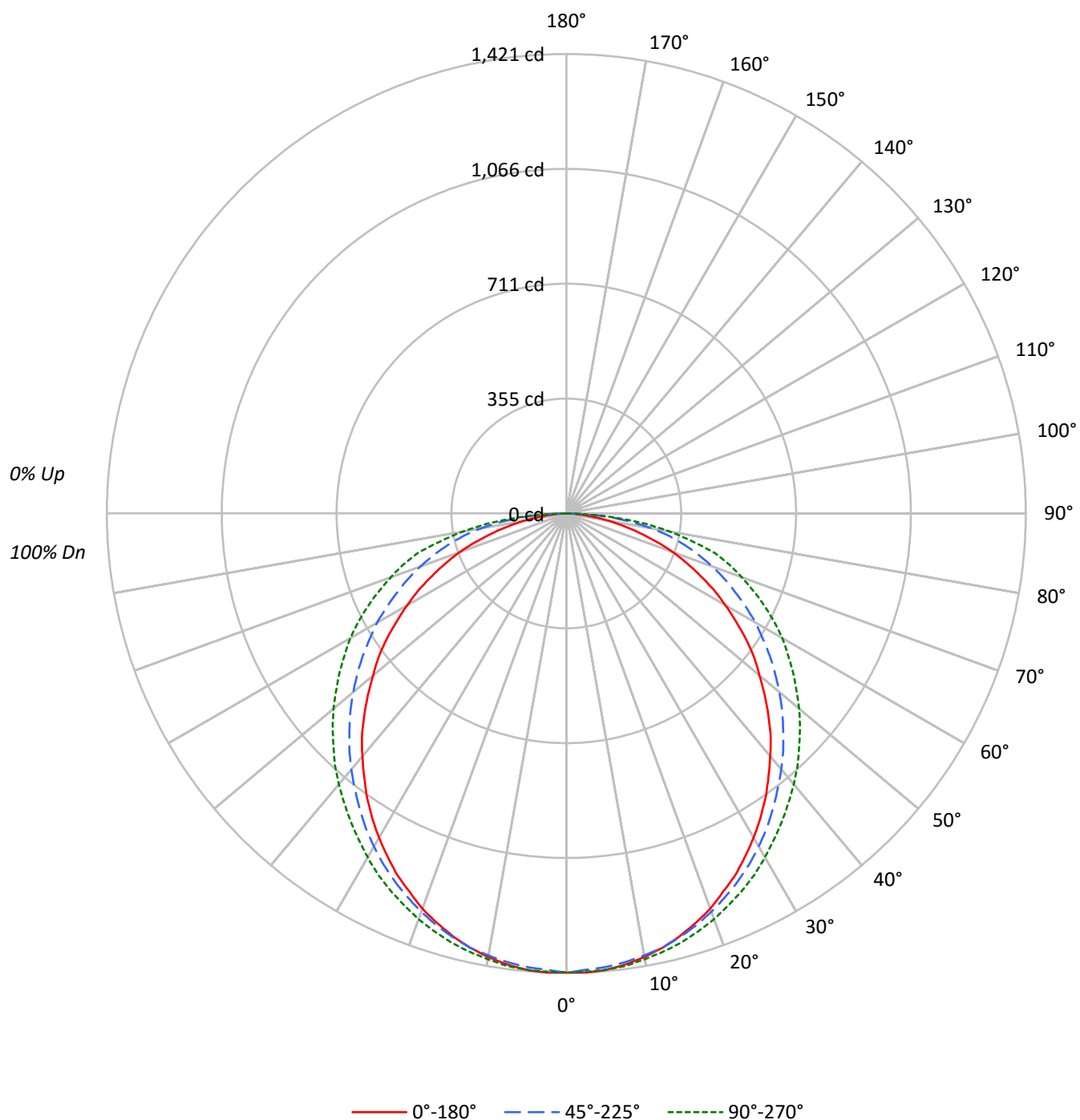
Input Watts (W): 38.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1910	1910	1910
5°	1914	1902	1914
10°	1903	1897	1912
15°	1886	1890	1914
20°	1863	1877	1912
25°	1834	1864	1911
30°	1800	1849	1908
35°	1764	1830	1910
40°	1724	1816	1922
45°	1682	1805	1938
50°	1632	1800	1967
55°	1592	1803	2007
60°	1530	1818	2076
65°	1460	1837	2151
70°	1382	1893	2270
75°	1233	1975	2480
80°	1051	2092	2534
85°	750	2073	2425



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	134.4	3.1
10°-20°	384.2	8.9
20°-30°	580.3	13.5
30°-40°	699.4	16.2
40°-50°	734.2	17.1
50°-60°	686.9	16.0
60°-70°	567.3	13.2
70°-80°	386.5	9.0
80°-90°	131.8	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°	1098.9	25.5
0°-40°	1798.2	41.8
0°-60°	3219.4	74.8
0°-90°	4305.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4305.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1420	1420	1420	1420	1420	
5°	1417	1416	1408	1417	1417	134
15°	1354	1356	1357	1371	1374	382
25°	1236	1241	1256	1280	1287	568
35°	1074	1086	1114	1151	1163	671
45°	884	903	948	1000	1018	682
55°	678	706	768	831	856	606
65°	458	497	577	650	676	455
75°	237	291	380	451	477	253
85°	49	96	134	151	157	61
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1419.8	1419.8	1419.8	1419.8	1419.8
2.5°	1421.2	1419.8	1412.6	1419.8	1418.3
5°	1416.9	1415.5	1408.3	1416.9	1416.9
7.5°	1406.9	1406.9	1399.8	1409.8	1411.2
10°	1392.6	1392.6	1388.3	1399.8	1399.8
12.5°	1375.5	1375.5	1375.5	1386.9	1388.3
15°	1354.0	1355.5	1356.9	1371.2	1374.0
17.5°	1328.3	1331.2	1335.5	1352.6	1355.5
20°	1301.2	1304.1	1311.2	1331.2	1335.5
22.5°	1266.9	1274.1	1284.1	1306.9	1311.2
25°	1235.5	1241.2	1255.5	1279.8	1286.9
27.5°	1196.9	1205.5	1224.1	1249.8	1259.8
30°	1158.4	1166.9	1189.8	1219.8	1228.4
32.5°	1116.9	1129.8	1154.1	1185.5	1195.5
35°	1074.1	1085.5	1114.1	1151.2	1162.7
37.5°	1027.0	1042.7	1074.1	1114.1	1128.4
40°	981.3	998.4	1034.1	1077.0	1094.1
42.5°	935.6	952.7	992.7	1041.2	1058.4
45°	884.1	902.7	948.4	999.8	1018.4
47.5°	832.7	855.6	905.6	959.8	979.8
50°	779.9	805.6	859.8	917.0	939.8
52.5°	732.7	757.0	814.1	875.6	897.0
55°	678.5	705.6	768.4	831.3	855.6
57.5°	622.7	652.7	719.9	788.4	812.7
60°	568.5	601.3	675.6	744.2	771.3
62.5°	515.6	548.5	625.6	697.0	724.2
65°	458.5	497.1	577.0	649.9	675.6
67.5°	404.2	445.6	529.9	601.3	627.0
70°	351.4	391.4	481.3	551.3	577.0
72.5°	294.2	339.9	429.9	502.8	529.9
75°	237.1	291.4	379.9	451.3	477.1
77.5°	184.3	240.0	328.5	387.1	399.9
80°	135.7	192.8	270.0	311.4	327.1
82.5°	87.1	144.3	205.7	235.7	248.5
85°	48.6	95.7	134.3	151.4	157.1
87.5°	20.0	41.4	54.3	61.4	61.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)