

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: P310859

Luminaire Tested: **24FCZ2-50HE-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: P310859
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: 24FCZ2-50HE-UNV-L82765-CA125-W2A-U-2700K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" ACRYLIC SHEET
Light Source: (336) 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: 4202.0 lumens
Efficiency: N/A
Efficacy: 109.4 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

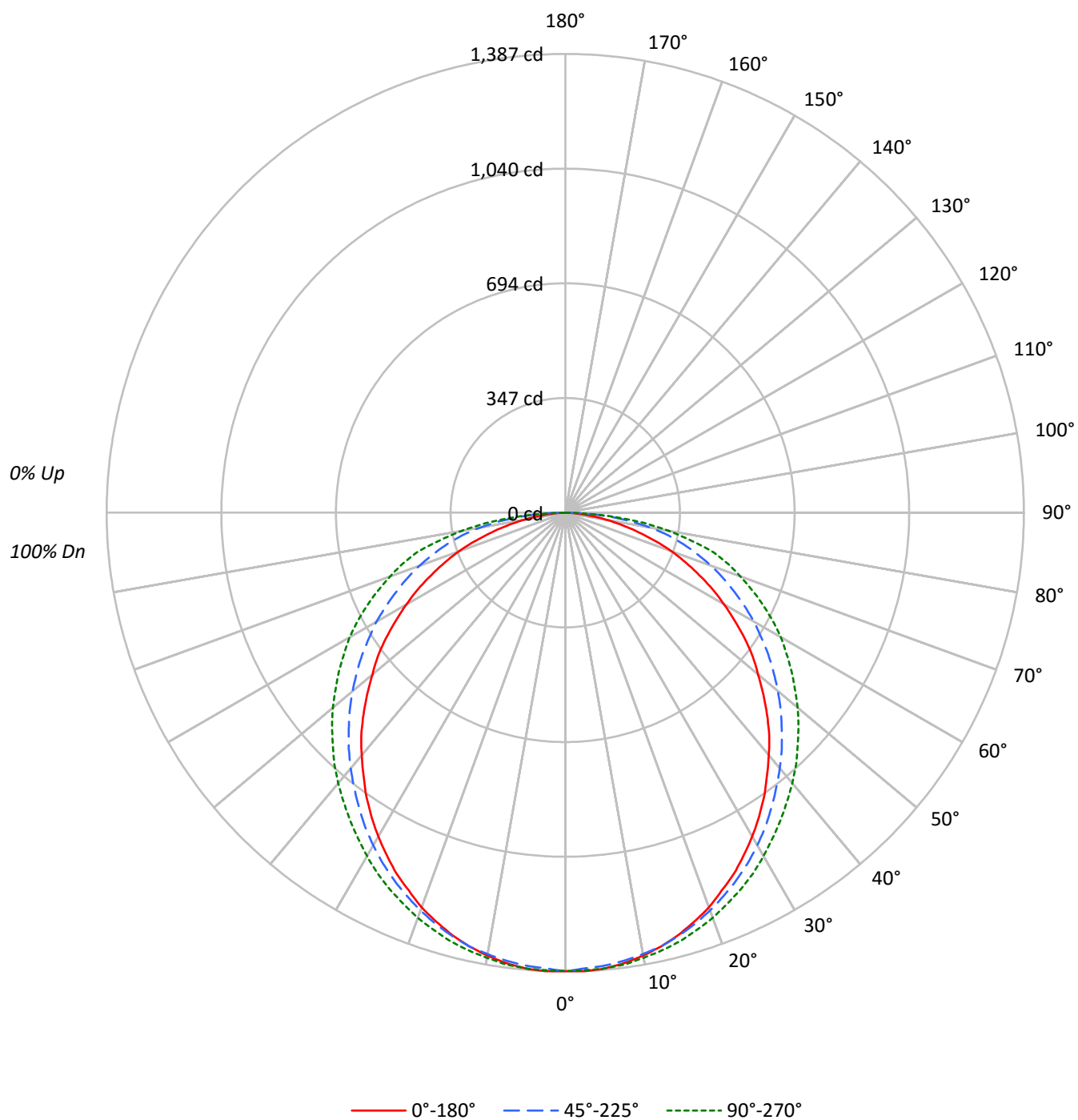
Input Watts (W): 38.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1865	1865	1865
5°	1868	1857	1868
10°	1857	1851	1867
15°	1841	1845	1868
20°	1819	1832	1866
25°	1790	1819	1865
30°	1757	1804	1863
35°	1722	1786	1864
40°	1682	1773	1876
45°	1642	1761	1891
50°	1593	1757	1920
55°	1553	1760	1959
60°	1493	1774	2026
65°	1425	1793	2099
70°	1349	1848	2216
75°	1203	1928	2420
80°	1026	2042	2474
85°	732	2022	2368



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	131.1	3.1
10°-20°	375.0	8.9
20°-30°	566.4	13.5
30°-40°	682.6	16.2
40°-50°	716.7	17.1
50°-60°	670.5	16.0
60°-70°	553.7	13.2
70°-80°	377.3	9.0
80°-90°	128.7	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°	1072.6	25.5
0°-40°	1755.2	41.8
0°-60°	3142.3	74.8
0°-90°	4202.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4202.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1386	1386	1386	1386	1386	
5°	1383	1382	1375	1383	1383	131
15°	1322	1323	1324	1338	1341	373
25°	1206	1212	1226	1249	1256	555
35°	1048	1060	1087	1124	1135	655
45°	863	881	926	976	994	666
55°	662	689	750	811	835	591
65°	448	485	563	634	659	444
75°	231	284	371	441	466	247
85°	47	93	131	148	153	59
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1385.8	1385.8	1385.8	1385.8	1385.8
2.5°	1387.2	1385.8	1378.8	1385.8	1384.4
5°	1383.0	1381.6	1374.6	1383.0	1383.0
7.5°	1373.2	1373.2	1366.3	1376.0	1377.4
10°	1359.3	1359.3	1355.1	1366.3	1366.3
12.5°	1342.6	1342.6	1342.6	1353.7	1355.1
15°	1321.7	1323.0	1324.4	1338.4	1341.2
17.5°	1296.6	1299.3	1303.5	1320.3	1323.0
20°	1270.1	1272.9	1279.8	1299.3	1303.5
22.5°	1236.6	1243.6	1253.3	1275.6	1279.8
25°	1205.9	1211.5	1225.5	1249.2	1256.1
27.5°	1168.3	1176.7	1194.8	1219.9	1229.6
30°	1130.7	1139.0	1161.3	1190.6	1199.0
32.5°	1090.2	1102.8	1126.5	1157.1	1166.9
35°	1048.4	1059.6	1087.4	1123.7	1134.8
37.5°	1002.4	1017.7	1048.4	1087.4	1101.4
40°	957.8	974.5	1009.4	1051.2	1067.9
42.5°	913.2	929.9	968.9	1016.3	1033.1
45°	863.0	881.1	925.7	975.9	994.0
47.5°	812.8	835.1	883.9	936.9	956.4
50°	761.2	786.3	839.3	895.0	917.3
52.5°	715.2	738.9	794.7	854.6	875.5
55°	662.2	688.7	750.1	811.4	835.1
57.5°	607.8	637.1	702.7	769.6	793.3
60°	554.9	586.9	659.4	726.4	752.8
62.5°	503.3	535.4	610.6	680.3	706.8
65°	447.5	485.2	563.2	634.3	659.4
67.5°	394.5	435.0	517.2	586.9	612.0
70°	343.0	382.0	469.8	538.1	563.2
72.5°	287.2	331.8	419.6	490.7	517.2
75°	231.4	284.4	370.8	440.6	465.6
77.5°	179.8	234.2	320.7	377.8	390.4
80°	132.4	188.2	263.5	303.9	319.3
82.5°	85.0	140.8	200.8	230.0	242.6
85°	47.4	93.4	131.0	147.8	153.4
87.5°	19.5	40.4	53.0	59.9	59.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)