

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: P310868

Luminaire Tested: **24FCZ2-50HE-UNV-L82765-CP125-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: P310868
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-CP125-W2A-U-2700K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" POLYCARB 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: 4120.0 lumens
Efficiency: N/A
Efficacy: 107.3 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

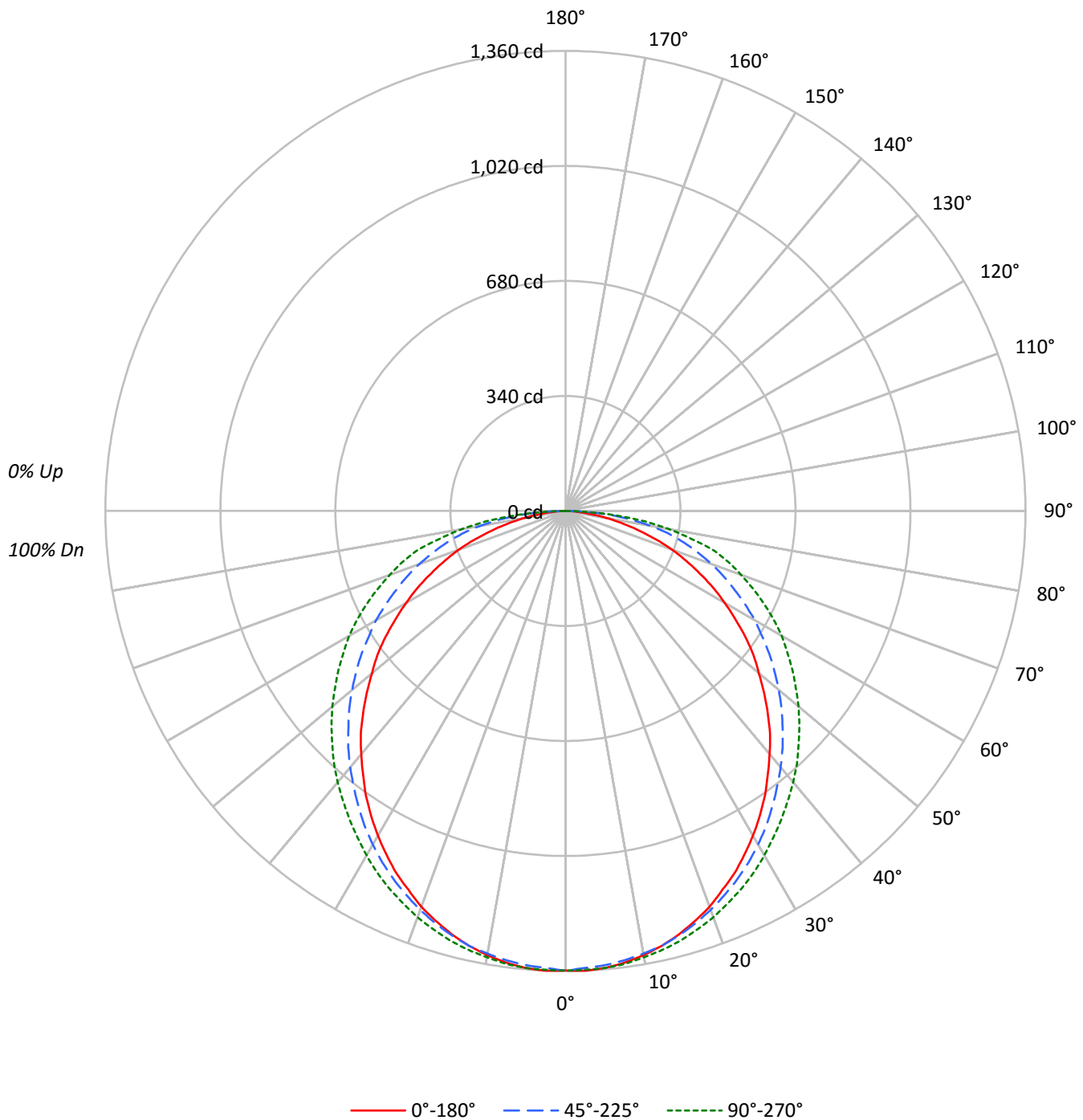
Input Watts (W): 38.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1828	1828	1828
5°	1831	1820	1831
10°	1821	1815	1830
15°	1805	1809	1832
20°	1783	1797	1830
25°	1755	1784	1828
30°	1722	1769	1826
35°	1688	1751	1828
40°	1649	1738	1839
45°	1610	1727	1854
50°	1562	1723	1883
55°	1523	1725	1921
60°	1464	1740	1986
65°	1397	1758	2059
70°	1323	1812	2172
75°	1180	1890	2374
80°	1007	2002	2425
85°	718	1984	2322



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	128.6	3.1
10°-20°	367.7	8.9
20°-30°	555.4	13.5
30°-40°	669.3	16.2
40°-50°	702.7	17.1
50°-60°	657.4	16.0
60°-70°	542.9	13.2
70°-80°	369.9	9.0
80°-90°	126.2	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°	1051.6	25.5
0°-40°	1721.0	41.8
0°-60°	3081.0	74.8
0°-90°	4120.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4120.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1359	1359	1359	1359	1359	
5°	1356	1355	1348	1356	1356	129
15°	1296	1297	1299	1312	1315	365
25°	1182	1188	1202	1225	1232	544
35°	1028	1039	1066	1102	1113	642
45°	846	864	908	957	975	653
55°	649	675	735	796	819	580
65°	439	476	552	622	647	435
75°	227	279	364	432	457	242
85°	46	92	128	145	150	58
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1358.7	1358.7	1358.7	1358.7	1358.7
2.5°	1360.1	1358.7	1351.9	1358.7	1357.4
5°	1356.0	1354.6	1347.8	1356.0	1356.0
7.5°	1346.4	1346.4	1339.6	1349.2	1350.5
10°	1332.8	1332.8	1328.7	1339.6	1339.6
12.5°	1316.4	1316.4	1316.4	1327.3	1328.7
15°	1295.9	1297.2	1298.6	1312.3	1315.0
17.5°	1271.3	1274.0	1278.1	1294.5	1297.2
20°	1245.3	1248.0	1254.9	1274.0	1278.1
22.5°	1212.5	1219.3	1228.9	1250.8	1254.9
25°	1182.4	1187.9	1201.5	1224.8	1231.6
27.5°	1145.5	1153.7	1171.5	1196.1	1205.6
30°	1108.6	1116.8	1138.7	1167.4	1175.6
32.5°	1068.9	1081.3	1104.5	1134.6	1144.1
35°	1027.9	1038.9	1066.2	1101.8	1112.7
37.5°	982.8	997.9	1027.9	1066.2	1079.9
40°	939.1	955.5	989.7	1030.7	1047.1
42.5°	895.3	911.8	950.0	996.5	1012.9
45°	846.1	863.9	907.6	956.9	974.6
47.5°	796.9	818.8	866.6	918.6	937.7
50°	746.4	771.0	822.9	877.6	899.4
52.5°	701.2	724.5	779.2	837.9	858.4
55°	649.3	675.3	735.4	795.6	818.8
57.5°	596.0	624.7	688.9	754.6	777.8
60°	544.0	575.5	646.6	712.2	738.1
62.5°	493.5	524.9	598.7	667.1	693.0
65°	438.8	475.7	552.2	622.0	646.6
67.5°	386.8	426.5	507.1	575.5	600.1
70°	336.3	374.5	460.7	527.6	552.2
72.5°	281.6	325.3	411.4	481.2	507.1
75°	226.9	278.9	363.6	432.0	456.6
77.5°	176.3	229.6	314.4	370.4	382.7
80°	129.9	184.5	258.4	298.0	313.0
82.5°	83.4	138.1	196.8	225.5	237.8
85°	46.5	91.6	128.5	144.9	150.4
87.5°	19.1	39.6	51.9	58.8	58.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)