

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: P313970

Luminaire Tested: **24FCZ2-45-UNV-L83050-CA125-W2A-U-3000K**

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: P313970
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-L83050-CA125-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" ACRYLIC SHEET
Light Source: (168) 3000K 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: 3902.0 lumens
Efficiency: N/A
Efficacy: 104.1 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

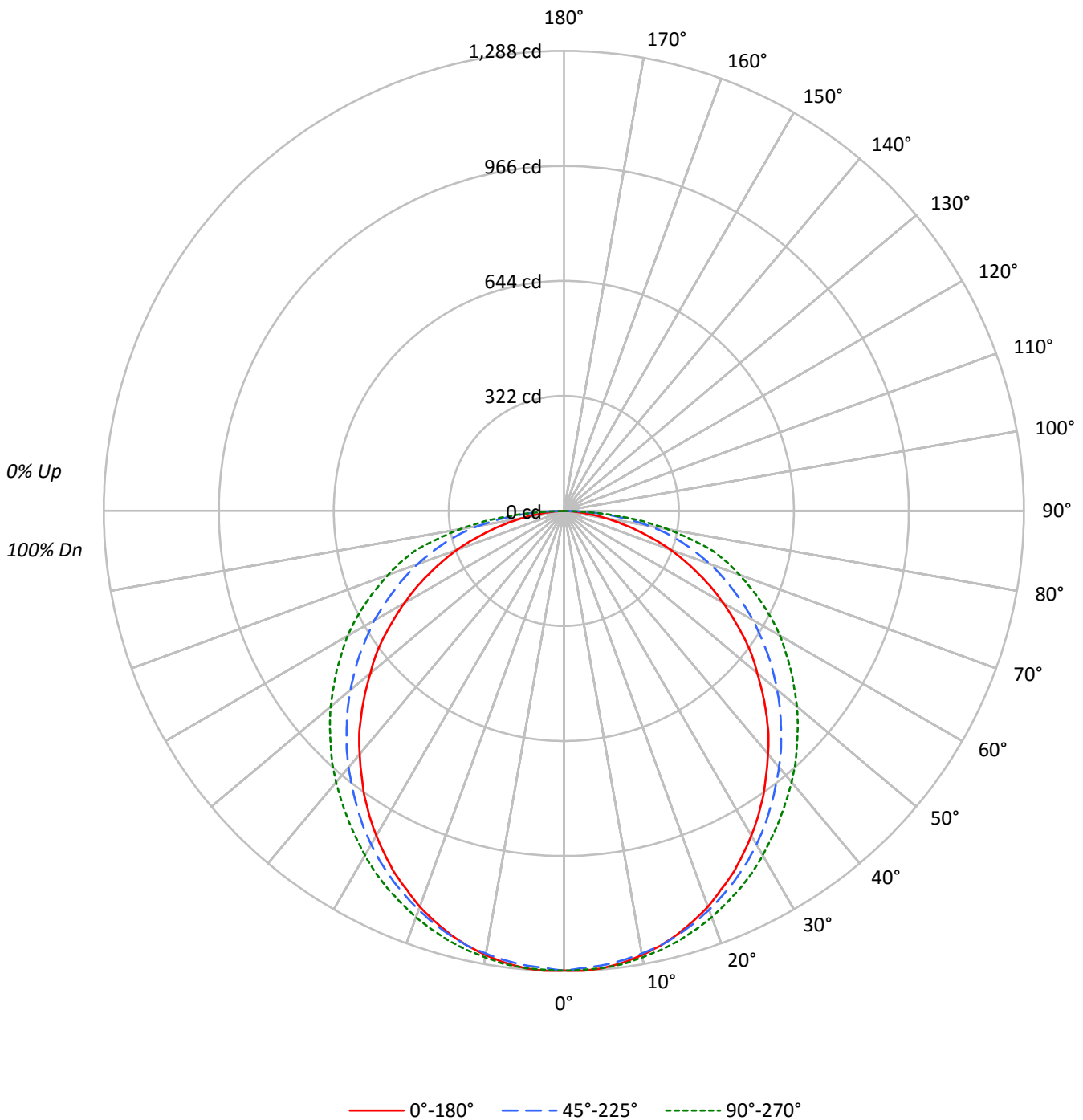
Input Watts (W): 37.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				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°	1731	1731	1731
5°	1735	1724	1735
10°	1724	1719	1733
15°	1710	1713	1735
20°	1689	1702	1733
25°	1662	1689	1732
30°	1631	1675	1730
35°	1599	1659	1731
40°	1562	1646	1742
45°	1525	1636	1756
50°	1480	1631	1783
55°	1442	1634	1819
60°	1387	1648	1881
65°	1323	1665	1950
70°	1253	1716	2057
75°	1117	1790	2248
80°	953	1896	2297
85°	679	1879	2198



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	121.8	3.1
10°-20°	348.2	8.9
20°-30°	526.0	13.5
30°-40°	633.9	16.2
40°-50°	665.5	17.1
50°-60°	622.6	16.0
60°-70°	514.2	13.2
70°-80°	350.4	9.0
80°-90°	119.5	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°	996.0	25.5
0°-40°	1629.9	41.8
0°-60°	2918.0	74.8
0°-90°	3902.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3902.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1287	1287	1287	1287	1287	
5°	1284	1283	1276	1284	1284	122
15°	1227	1229	1230	1243	1245	346
25°	1120	1125	1138	1160	1166	515
35°	974	984	1010	1044	1054	608
45°	801	818	860	906	923	618
55°	615	640	696	754	776	549
65°	416	450	523	589	612	412
75°	215	264	344	409	432	229
85°	44	87	122	137	142	55
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1286.8	1286.8	1286.8	1286.8	1286.8
2.5°	1288.1	1286.8	1280.4	1286.8	1285.6
5°	1284.3	1283.0	1276.5	1284.3	1284.3
7.5°	1275.2	1275.2	1268.7	1277.8	1279.1
10°	1262.2	1262.2	1258.4	1268.7	1268.7
12.5°	1246.7	1246.7	1246.7	1257.1	1258.4
15°	1227.3	1228.6	1229.9	1242.8	1245.4
17.5°	1204.0	1206.6	1210.5	1226.0	1228.6
20°	1179.4	1182.0	1188.5	1206.6	1210.5
22.5°	1148.3	1154.8	1163.9	1184.6	1188.5
25°	1119.8	1125.0	1138.0	1160.0	1166.4
27.5°	1084.9	1092.7	1109.5	1132.8	1141.8
30°	1049.9	1057.7	1078.4	1105.6	1113.4
32.5°	1012.4	1024.0	1046.0	1074.5	1083.6
35°	973.5	983.9	1009.8	1043.5	1053.8
37.5°	930.8	945.1	973.5	1009.8	1022.7
40°	889.4	904.9	937.3	976.1	991.7
42.5°	848.0	863.5	899.8	943.8	959.3
45°	801.4	818.2	859.6	906.2	923.1
47.5°	754.8	775.5	820.8	870.0	888.1
50°	706.9	730.2	779.4	831.1	851.9
52.5°	664.1	686.1	737.9	793.6	813.0
55°	614.9	639.5	696.5	753.5	775.5
57.5°	564.5	591.6	652.5	714.6	736.6
60°	515.3	545.0	612.4	674.5	699.1
62.5°	467.4	497.1	567.0	631.8	656.4
65°	415.6	450.5	523.0	589.0	612.4
67.5°	366.4	403.9	480.3	545.0	568.3
70°	318.5	354.7	436.3	499.7	523.0
72.5°	266.7	308.1	389.7	455.7	480.3
75°	214.9	264.1	344.4	409.1	432.4
77.5°	167.0	217.5	297.8	350.8	362.5
80°	123.0	174.8	244.7	282.2	296.5
82.5°	79.0	130.8	186.4	213.6	225.3
85°	44.0	86.7	121.7	137.2	142.4
87.5°	18.1	37.5	49.2	55.7	55.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)