

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: P310837

Luminaire Tested: **24FCZ2-45-UNV-L82765-CP187-W2A-U-5000K**

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: P310837
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-CP187-W2A-U-5000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.187" POLYCARB SHEET
Light Source: (168) 5000K 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: 3992.0 lumens
Efficiency: N/A
Efficacy: 103.7 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

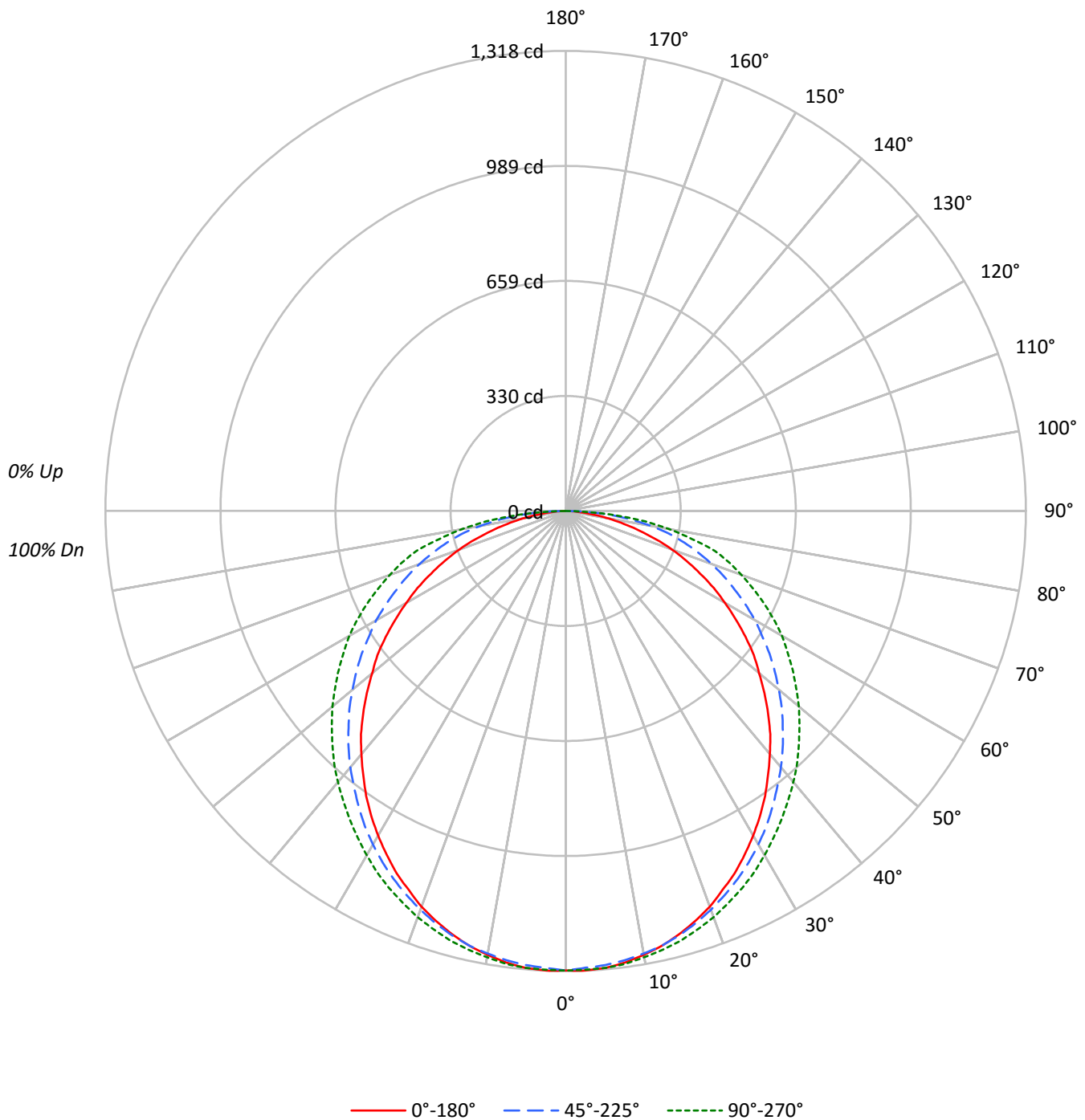
Input Watts (W): 38.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				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°	1771	1771	1771
5°	1775	1764	1775
10°	1764	1759	1773
15°	1749	1753	1775
20°	1728	1741	1773
25°	1701	1728	1772
30°	1669	1714	1770
35°	1636	1697	1771
40°	1598	1684	1782
45°	1560	1674	1797
50°	1514	1669	1824
55°	1476	1672	1861
60°	1418	1686	1925
65°	1354	1704	1995
70°	1282	1756	2105
75°	1143	1831	2300
80°	975	1939	2350
85°	695	1922	2249



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	124.6	3.1
10°-20°	356.3	8.9
20°-30°	538.1	13.5
30°-40°	648.5	16.2
40°-50°	680.8	17.1
50°-60°	637.0	16.0
60°-70°	526.0	13.2
70°-80°	358.4	9.0
80°-90°	122.2	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°	1019.0	25.5
0°-40°	1667.5	41.8
0°-60°	2985.3	74.8
0°-90°	3992.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3992.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1316	1316	1316	1316	1316	
5°	1314	1313	1306	1314	1314	125
15°	1256	1257	1258	1272	1274	354
25°	1146	1151	1164	1187	1193	527
35°	996	1007	1033	1068	1078	622
45°	820	837	880	927	944	632
55°	629	654	713	771	793	562
65°	425	461	535	603	626	422
75°	220	270	352	418	442	234
85°	45	89	124	140	146	56
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1316.5	1316.5	1316.5	1316.5	1316.5
2.5°	1317.9	1316.5	1309.9	1316.5	1315.2
5°	1313.9	1312.6	1305.9	1313.9	1313.9
7.5°	1304.6	1304.6	1298.0	1307.3	1308.6
10°	1291.4	1291.4	1287.4	1298.0	1298.0
12.5°	1275.5	1275.5	1275.5	1286.1	1287.4
15°	1255.6	1256.9	1258.3	1271.5	1274.1
17.5°	1231.8	1234.4	1238.4	1254.3	1256.9
20°	1206.6	1209.2	1215.9	1234.4	1238.4
22.5°	1174.8	1181.4	1190.7	1211.9	1215.9
25°	1145.7	1151.0	1164.2	1186.7	1193.4
27.5°	1109.9	1117.9	1135.1	1158.9	1168.2
30°	1074.1	1082.1	1103.3	1131.1	1139.0
32.5°	1035.7	1047.7	1070.2	1099.3	1108.6
35°	996.0	1006.6	1033.1	1067.5	1078.1
37.5°	952.3	966.9	996.0	1033.1	1046.3
40°	909.9	925.8	958.9	998.7	1014.5
42.5°	867.5	883.4	920.5	965.5	981.4
45°	819.8	837.1	879.5	927.1	944.3
47.5°	772.2	793.4	839.7	890.0	908.6
50°	723.2	747.0	797.3	850.3	871.5
52.5°	679.5	702.0	755.0	811.9	831.8
55°	629.1	654.3	712.6	770.8	793.4
57.5°	577.5	605.3	667.5	731.1	753.6
60°	527.1	557.6	626.5	690.1	715.2
62.5°	478.1	508.6	580.1	646.3	671.5
65°	425.2	460.9	535.1	602.6	626.5
67.5°	374.8	413.2	491.4	557.6	581.4
70°	325.8	362.9	446.3	511.2	535.1
72.5°	272.8	315.2	398.7	466.2	491.4
75°	219.9	270.2	352.3	418.5	442.4
77.5°	170.9	222.5	304.6	358.9	370.9
80°	125.8	178.8	250.3	288.7	303.3
82.5°	80.8	133.8	190.7	218.5	230.5
85°	45.0	88.7	124.5	140.4	145.7
87.5°	18.5	38.4	50.3	57.0	57.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)