

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: P313935

Luminaire Tested: **24FCZ2-40-UNV-L83050-CP250-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: P313935
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: 24FCZ2-40-UNV-L83050-CP250-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.250" POLYCARB 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

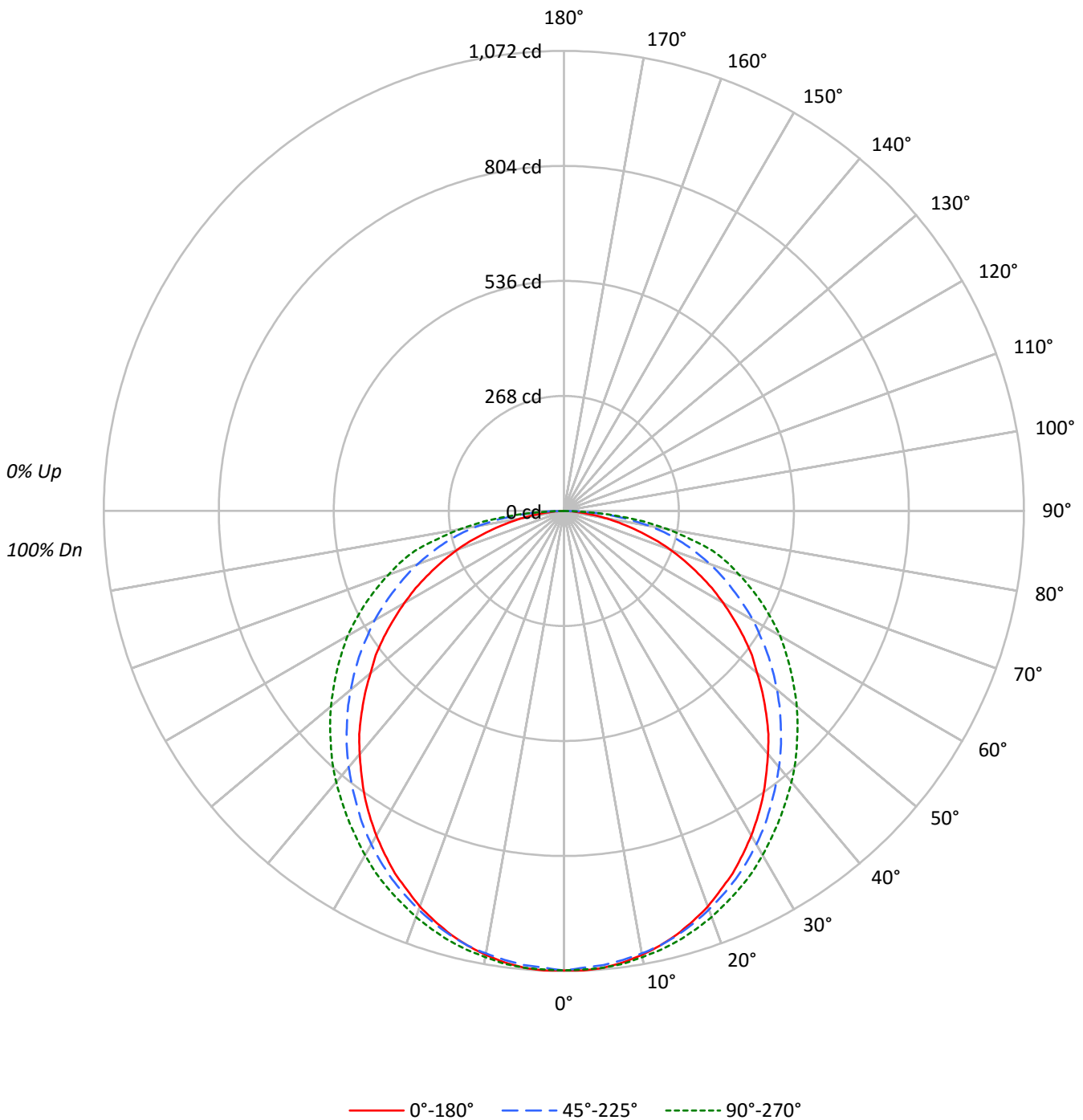
Lumens per Lamp: N/A
Luminaire Lumens: 3246.0 lumens
Efficiency: N/A
Efficacy: 99.6 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 32.6
Input Voltage (V): NR
Input Current (A_{in}): 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°	1440	1440	1440
5°	1443	1434	1443
10°	1435	1430	1442
15°	1422	1425	1443
20°	1405	1416	1442
25°	1383	1405	1440
30°	1357	1394	1439
35°	1330	1380	1440
40°	1300	1369	1449
45°	1268	1361	1461
50°	1231	1357	1483
55°	1200	1359	1513
60°	1153	1371	1565
65°	1101	1385	1622
70°	1042	1428	1712
75°	930	1489	1870
80°	793	1577	1911
85°	565	1562	1829



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	101.3	3.1
10°-20°	289.7	8.9
20°-30°	437.5	13.5
30°-40°	527.3	16.2
40°-50°	553.6	17.1
50°-60°	517.9	16.0
60°-70°	427.7	13.2
70°-80°	291.5	9.0
80°-90°	99.4	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°	828.5	25.5
0°-40°	1355.9	41.8
0°-60°	2427.4	74.8
0°-90°	3246.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3246.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1070	1070	1070	1070	1070	
5°	1068	1067	1062	1068	1068	101
15°	1021	1022	1023	1034	1036	288
25°	932	936	947	965	970	429
35°	810	818	840	868	877	506
45°	667	681	715	754	768	514
55°	512	532	579	627	645	457
65°	346	375	435	490	509	343
75°	179	220	286	340	360	191
85°	37	72	101	114	118	46
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1070.5	1070.5	1070.5	1070.5	1070.5
2.5°	1071.6	1070.5	1065.1	1070.5	1069.4
5°	1068.3	1067.3	1061.9	1068.3	1068.3
7.5°	1060.8	1060.8	1055.4	1063.0	1064.0
10°	1050.0	1050.0	1046.8	1055.4	1055.4
12.5°	1037.1	1037.1	1037.1	1045.7	1046.8
15°	1021.0	1022.0	1023.1	1033.9	1036.0
17.5°	1001.6	1003.7	1007.0	1019.9	1022.0
20°	981.1	983.3	988.7	1003.7	1007.0
22.5°	955.3	960.7	968.2	985.4	988.7
25°	931.6	935.9	946.7	965.0	970.3
27.5°	902.5	909.0	923.0	942.3	949.9
30°	873.4	879.9	897.1	919.7	926.2
32.5°	842.2	851.9	870.2	893.9	901.4
35°	809.9	818.5	840.0	868.0	876.6
37.5°	774.3	786.2	809.9	840.0	850.8
40°	739.9	752.8	779.7	812.0	825.0
42.5°	705.4	718.3	748.5	785.1	798.0
45°	666.6	680.6	715.1	753.9	767.9
47.5°	627.9	645.1	682.8	723.7	738.8
50°	588.0	607.4	648.3	691.4	708.6
52.5°	552.5	570.8	613.9	660.2	676.3
55°	511.6	532.0	579.4	626.8	645.1
57.5°	469.6	492.2	542.8	594.5	612.8
60°	428.6	453.4	509.4	561.1	581.6
62.5°	388.8	413.6	471.7	525.6	546.0
65°	345.7	374.8	435.1	490.0	509.4
67.5°	304.8	336.0	399.6	453.4	472.8
70°	264.9	295.1	362.9	415.7	435.1
72.5°	221.9	256.3	324.2	379.1	399.6
75°	178.8	219.7	286.5	340.3	359.7
77.5°	138.9	180.9	247.7	291.9	301.6
80°	102.3	145.4	203.5	234.8	246.6
82.5°	65.7	108.8	155.1	177.7	187.4
85°	36.6	72.2	101.2	114.2	118.5
87.5°	15.1	31.2	40.9	46.3	46.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)