

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: P313930

Luminaire Tested: **24FCZ2-40-UNV-L83050-CP187-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: P313930
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-CP187-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.187" 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

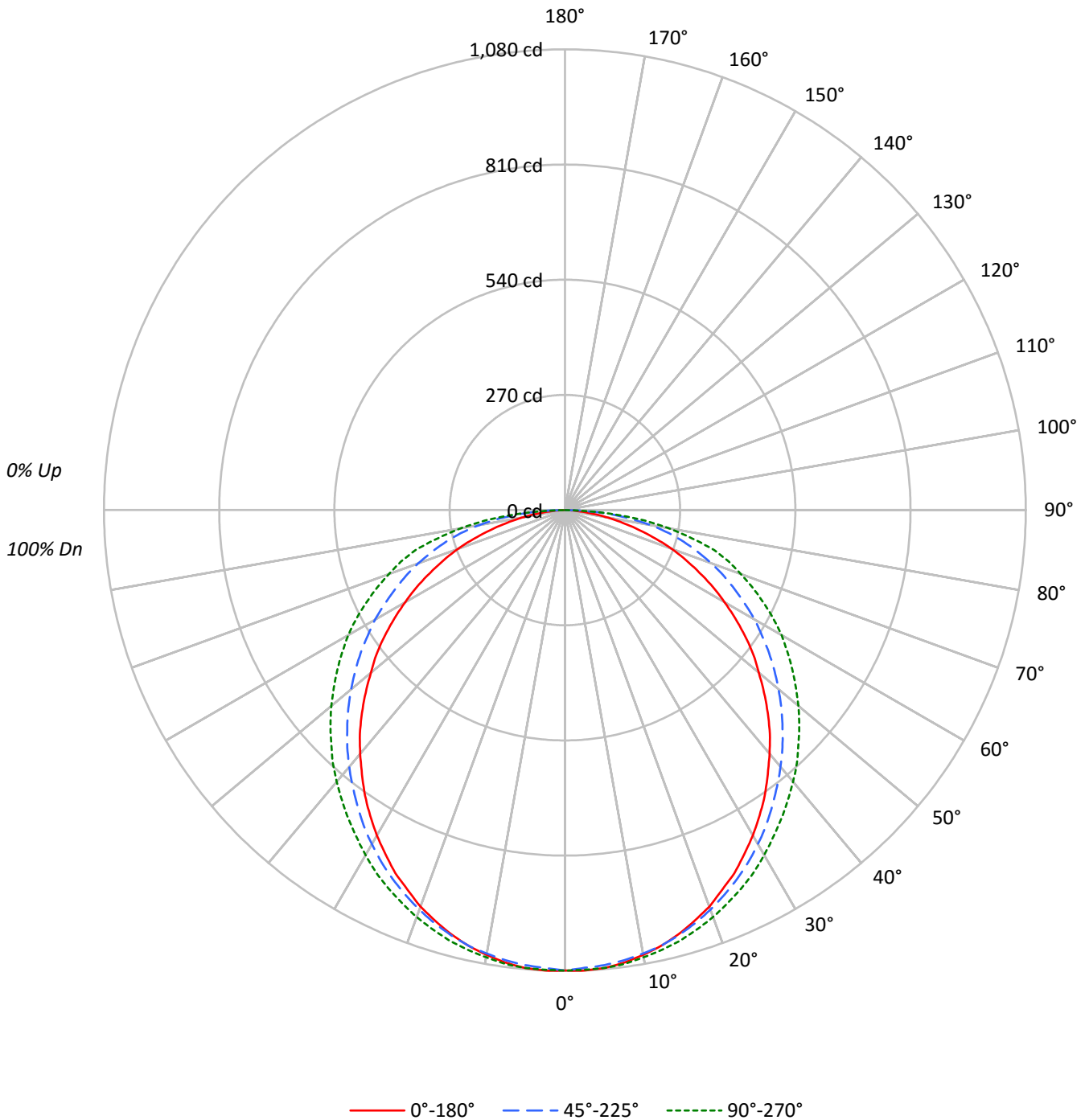
Lumens per Lamp: N/A
Luminaire Lumens: 3273.0 lumens
Efficiency: N/A
Efficacy: 100.4 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	1452	1452	1452
5°	1455	1446	1455
10°	1447	1442	1454
15°	1434	1437	1455
20°	1417	1427	1454
25°	1394	1417	1453
30°	1368	1405	1451
35°	1341	1391	1452
40°	1310	1381	1461
45°	1279	1372	1473
50°	1241	1368	1496
55°	1210	1370	1526
60°	1163	1382	1578
65°	1110	1397	1635
70°	1051	1440	1726
75°	937	1502	1886
80°	800	1590	1927
85°	570	1576	1845



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	102.2	3.1
10°-20°	292.1	8.9
20°-30°	441.2	13.5
30°-40°	531.7	16.2
40°-50°	558.2	17.1
50°-60°	522.2	16.0
60°-70°	431.3	13.2
70°-80°	293.9	9.0
80°-90°	100.2	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°	835.4	25.5
0°-40°	1367.1	41.8
0°-60°	2447.6	74.8
0°-90°	3273.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3273.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1079	1079	1079	1079	1079	
5°	1077	1076	1071	1077	1077	102
15°	1030	1030	1032	1042	1045	290
25°	939	944	954	973	978	432
35°	817	825	847	875	884	510
45°	672	686	721	760	774	518
55°	516	536	584	632	650	460
65°	349	378	439	494	514	346
75°	180	222	289	343	363	192
85°	37	73	102	115	120	46
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1079.4	1079.4	1079.4	1079.4	1079.4
2.5°	1080.5	1079.4	1074.0	1079.4	1078.3
5°	1077.2	1076.1	1070.7	1077.2	1077.2
7.5°	1069.6	1069.6	1064.2	1071.8	1072.9
10°	1058.8	1058.8	1055.5	1064.2	1064.2
12.5°	1045.7	1045.7	1045.7	1054.4	1055.5
15°	1029.5	1030.5	1031.6	1042.5	1044.7
17.5°	1009.9	1012.1	1015.3	1028.4	1030.5
20°	989.3	991.4	996.9	1012.1	1015.3
22.5°	963.2	968.6	976.2	993.6	996.9
25°	939.3	943.7	954.5	973.0	978.4
27.5°	910.0	916.5	930.6	950.2	957.8
30°	880.7	887.2	904.6	927.4	933.9
32.5°	849.2	859.0	877.4	901.3	908.9
35°	816.6	825.3	847.0	875.3	883.9
37.5°	780.8	792.7	816.6	847.0	857.9
40°	746.0	759.1	786.2	818.8	831.8
42.5°	711.3	724.3	754.7	791.6	804.7
45°	672.2	686.3	721.1	760.1	774.3
47.5°	633.1	650.5	688.5	729.7	744.9
50°	592.9	612.5	653.7	697.2	714.5
52.5°	557.1	575.5	619.0	665.7	682.0
55°	515.8	536.4	584.2	632.0	650.5
57.5°	473.5	496.3	547.3	599.4	617.9
60°	432.2	457.2	513.6	565.8	586.4
62.5°	392.0	417.0	475.6	529.9	550.6
65°	348.6	377.9	438.7	494.1	513.6
67.5°	307.3	338.8	402.9	457.2	476.7
70°	267.1	297.5	366.0	419.2	438.7
72.5°	223.7	258.4	326.9	382.2	402.9
75°	180.3	221.5	288.9	343.2	362.7
77.5°	140.1	182.4	249.8	294.3	304.1
80°	103.2	146.6	205.2	236.7	248.7
82.5°	66.2	109.7	156.4	179.2	189.0
85°	36.9	72.8	102.1	115.1	119.5
87.5°	15.2	31.5	41.3	46.7	46.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)