

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: P310754

Luminaire Tested: **24FCZ2-40-UNV-L82765-CP250-W2A-U-4000K**

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: P310754
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-L82765-CP250-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.250" POLYCARB SHEET
Light Source: (168) 4000K 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: 3429.0 lumens
Efficiency: N/A
Efficacy: 103.6 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

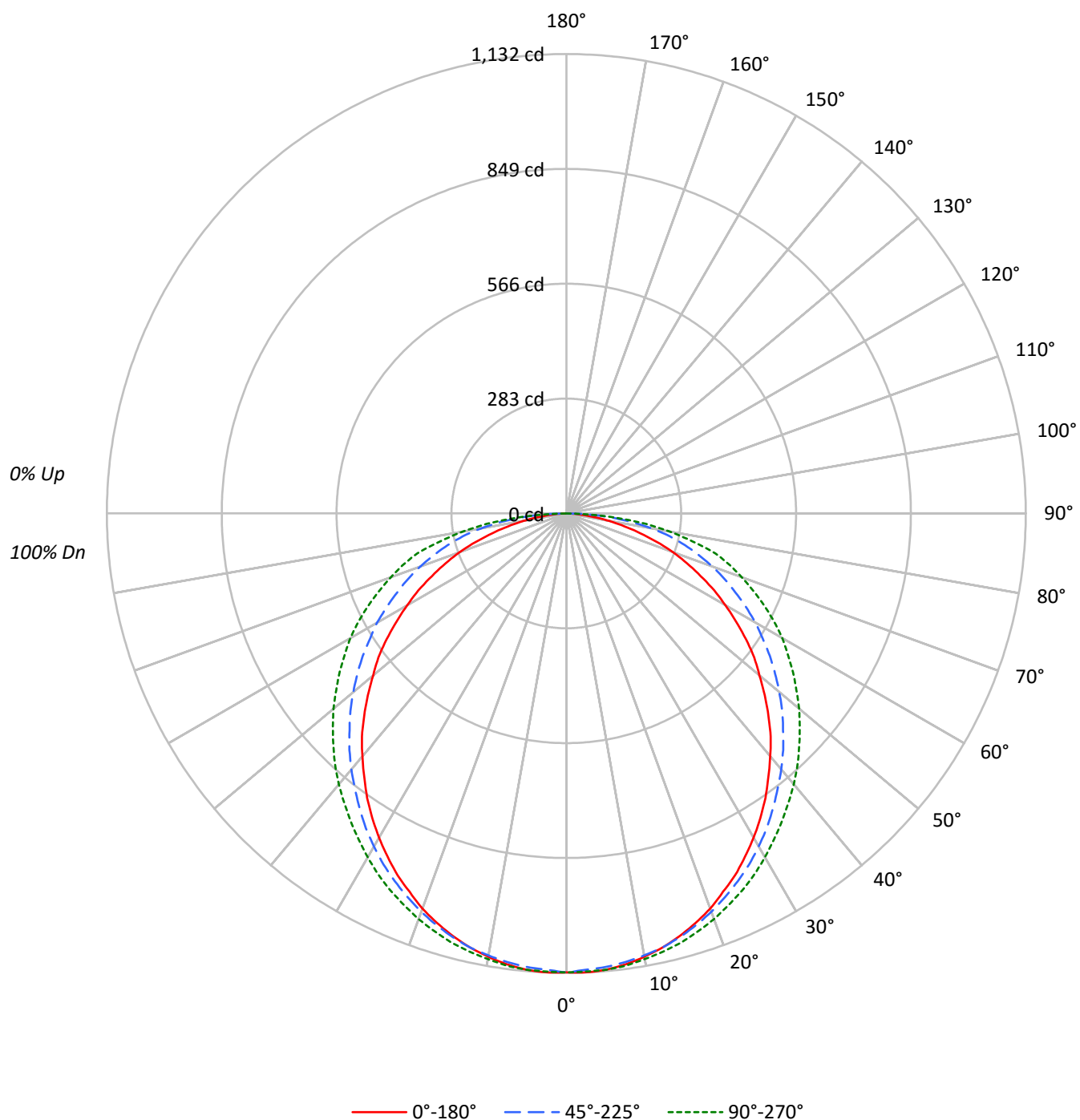
Input Watts (W): 33.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1522	1522	1522
5°	1524	1515	1524
10°	1515	1511	1523
15°	1502	1506	1524
20°	1484	1495	1523
25°	1461	1485	1522
30°	1434	1472	1520
35°	1405	1458	1521
40°	1373	1447	1531
45°	1340	1437	1544
50°	1300	1434	1567
55°	1268	1436	1599
60°	1218	1448	1653
65°	1163	1463	1713
70°	1101	1508	1808
75°	982	1573	1975
80°	838	1666	2018
85°	597	1650	1931



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	107.0	3.1
10°-20°	306.0	8.9
20°-30°	462.2	13.5
30°-40°	557.1	16.2
40°-50°	584.8	17.1
50°-60°	547.1	16.0
60°-70°	451.8	13.2
70°-80°	307.9	9.0
80°-90°	105.0	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°	875.2	25.5
0°-40°	1432.3	41.8
0°-60°	2564.3	74.8
0°-90°	3429.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3429.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1131	1131	1131	1131	1131	
5°	1129	1127	1122	1129	1129	107
15°	1078	1080	1081	1092	1094	304
25°	984	989	1000	1019	1025	453
35°	856	865	887	917	926	535
45°	704	719	755	796	811	543
55°	540	562	612	662	682	482
65°	365	396	460	518	538	362
75°	189	232	303	360	380	201
85°	39	76	107	121	125	48
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1130.9	1130.9	1130.9	1130.9	1130.9
2.5°	1132.0	1130.9	1125.2	1130.9	1129.7
5°	1128.6	1127.4	1121.8	1128.6	1128.6
7.5°	1120.6	1120.6	1114.9	1122.9	1124.0
10°	1109.2	1109.2	1105.8	1114.9	1114.9
12.5°	1095.6	1095.6	1095.6	1104.7	1105.8
15°	1078.5	1079.7	1080.8	1092.2	1094.4
17.5°	1058.0	1060.3	1063.7	1077.4	1079.7
20°	1036.4	1038.7	1044.4	1060.3	1063.7
22.5°	1009.1	1014.8	1022.8	1041.0	1044.4
25°	984.1	988.6	1000.0	1019.4	1025.1
27.5°	953.4	960.2	975.0	995.5	1003.4
30°	922.7	929.5	947.7	971.6	978.4
32.5°	889.7	899.9	919.2	944.3	952.2
35°	855.5	864.6	887.4	917.0	926.1
37.5°	818.0	830.5	855.5	887.4	898.8
40°	781.6	795.2	823.7	857.8	871.5
42.5°	745.2	758.8	790.7	829.4	843.0
45°	704.2	719.0	755.4	796.4	811.2
47.5°	663.3	681.5	721.3	764.5	780.4
50°	621.2	641.7	684.9	730.4	748.6
52.5°	583.6	603.0	648.5	697.4	714.5
55°	540.4	562.0	612.1	662.1	681.5
57.5°	496.0	519.9	573.4	628.0	647.3
60°	452.8	479.0	538.1	592.7	614.3
62.5°	410.7	436.9	498.3	555.2	576.8
65°	365.2	395.9	459.6	517.6	538.1
67.5°	322.0	355.0	422.1	479.0	499.4
70°	279.9	311.7	383.4	439.1	459.6
72.5°	234.4	270.8	342.4	400.5	422.1
75°	188.9	232.1	302.6	359.5	380.0
77.5°	146.8	191.1	261.7	308.3	318.6
80°	108.1	153.6	215.0	248.0	260.5
82.5°	69.4	114.9	163.8	187.7	198.0
85°	38.7	76.2	106.9	120.6	125.1
87.5°	15.9	33.0	43.2	48.9	48.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)