

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: P310720

Luminaire Tested: **24FCZ2-40-UNV-L82765-CA08-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: P310720
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-CA08-W2A-U-5000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.08" ACRYLIC 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: 3811.0 lumens
Efficiency: N/A
Efficacy: 113.8 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

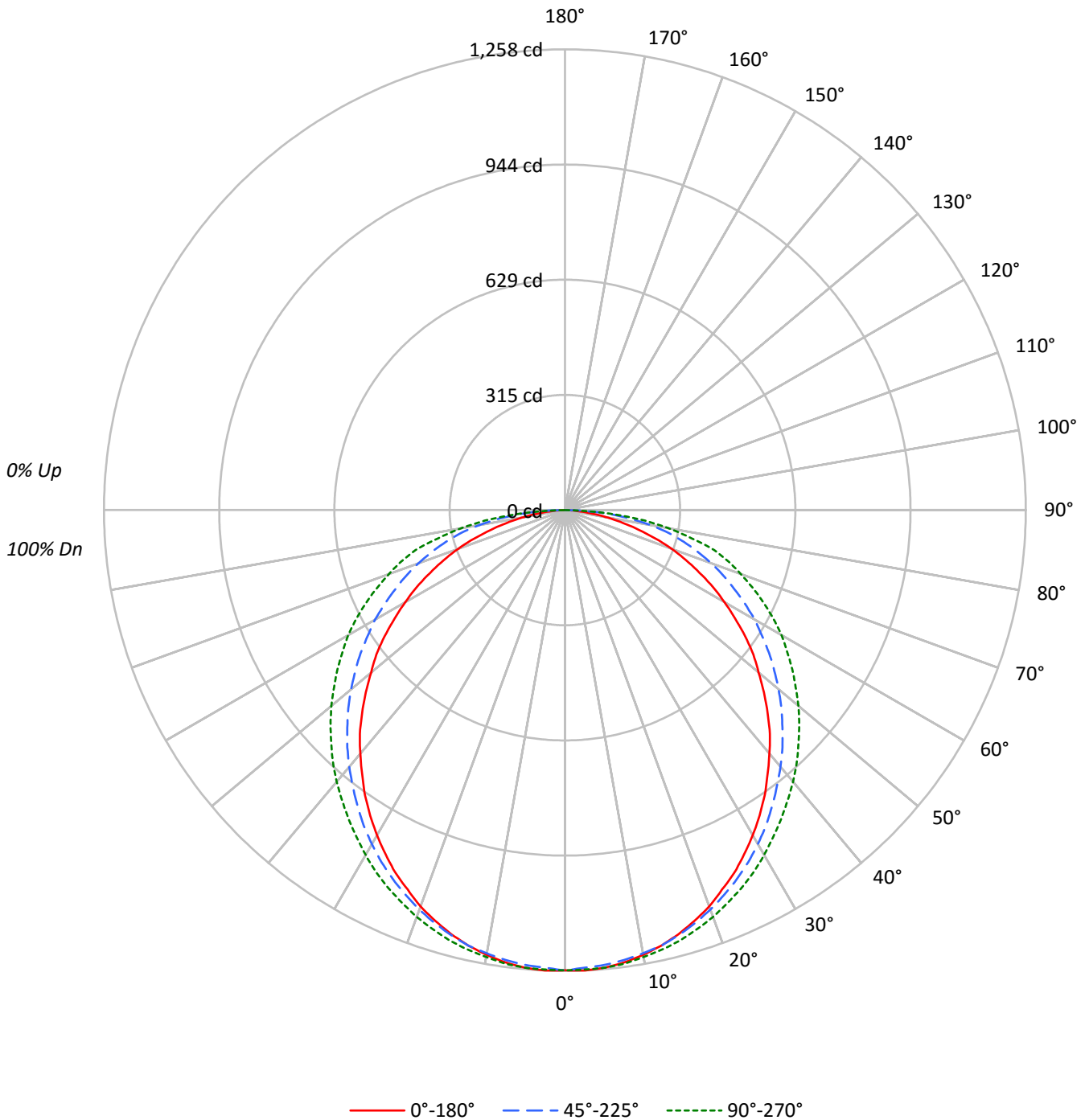
Input Watts (W): 33.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1691	1691	1691
5°	1694	1684	1694
10°	1684	1679	1693
15°	1670	1673	1694
20°	1649	1662	1693
25°	1624	1650	1691
30°	1593	1636	1689
35°	1562	1620	1691
40°	1526	1608	1701
45°	1489	1598	1715
50°	1445	1593	1742
55°	1409	1596	1777
60°	1354	1609	1837
65°	1292	1626	1904
70°	1223	1676	2009
75°	1091	1748	2195
80°	931	1852	2244
85°	664	1836	2147



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	118.9	3.1
10°-20°	340.1	8.9
20°-30°	513.7	13.5
30°-40°	619.1	16.2
40°-50°	650.0	17.1
50°-60°	608.1	16.0
60°-70°	502.2	13.2
70°-80°	342.2	9.0
80°-90°	116.7	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°	972.7	25.5
0°-40°	1591.9	41.8
0°-60°	2849.9	74.8
0°-90°	3811.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3811.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1257	1257	1257	1257	1257	
5°	1254	1253	1247	1254	1254	119
15°	1199	1200	1201	1214	1216	338
25°	1094	1099	1111	1133	1139	503
35°	951	961	986	1019	1029	594
45°	783	799	840	885	902	604
55°	601	625	680	736	757	536
65°	406	440	511	575	598	403
75°	210	258	336	400	422	224
85°	43	85	119	134	139	54
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1256.8	1256.8	1256.8	1256.8	1256.8
2.5°	1258.1	1256.8	1250.5	1256.8	1255.6
5°	1254.3	1253.0	1246.7	1254.3	1254.3
7.5°	1245.5	1245.5	1239.1	1248.0	1249.2
10°	1232.8	1232.8	1229.0	1239.1	1239.1
12.5°	1217.6	1217.6	1217.6	1227.8	1229.0
15°	1198.7	1199.9	1201.2	1213.8	1216.4
17.5°	1175.9	1178.4	1182.2	1197.4	1199.9
20°	1151.9	1154.4	1160.7	1178.4	1182.2
22.5°	1121.5	1127.9	1136.7	1156.9	1160.7
25°	1093.7	1098.8	1111.4	1132.9	1139.2
27.5°	1059.6	1067.2	1083.6	1106.4	1115.2
30°	1025.4	1033.0	1053.3	1079.8	1087.4
32.5°	988.8	1000.2	1021.7	1049.5	1058.3
35°	950.8	961.0	986.2	1019.1	1029.2
37.5°	909.1	923.0	950.8	986.2	998.9
40°	868.7	883.8	915.4	953.4	968.5
42.5°	828.2	843.4	878.8	921.8	936.9
45°	782.7	799.1	839.6	885.1	901.5
47.5°	737.2	757.4	801.6	849.7	867.4
50°	690.4	713.1	761.2	811.8	832.0
52.5°	648.6	670.1	720.7	775.1	794.1
55°	600.6	624.6	680.3	735.9	757.4
57.5°	551.3	577.8	637.3	698.0	719.5
60°	503.2	532.3	598.1	658.8	682.8
62.5°	456.5	485.5	553.8	617.0	641.1
65°	405.9	440.0	510.8	575.3	598.1
67.5°	357.8	394.5	469.1	532.3	555.1
70°	311.0	346.5	426.1	488.1	510.8
72.5°	260.5	300.9	380.6	445.1	469.1
75°	209.9	257.9	336.3	399.6	422.3
77.5°	163.1	212.4	290.8	342.7	354.0
80°	120.1	170.7	239.0	275.6	289.6
82.5°	77.1	127.7	182.1	208.6	220.0
85°	43.0	84.7	118.9	134.0	139.1
87.5°	17.7	36.7	48.0	54.4	54.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)