

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: P314290

Luminaire Tested: **24FCZ2-40-UNV-L83050-S-CA08-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: P314290
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)
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-S-CA08-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.08" ACRYLIC 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

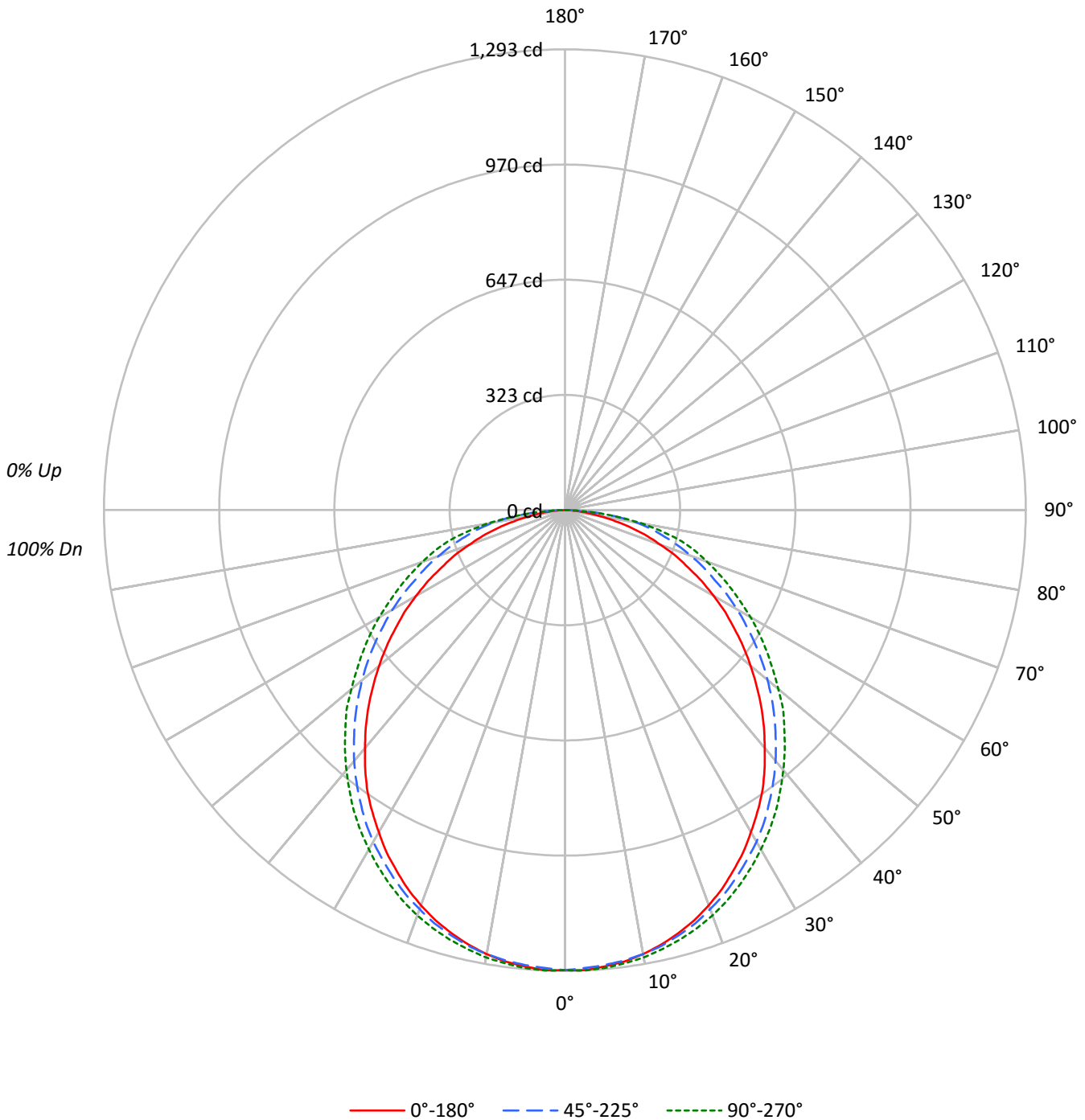
Lumens per Lamp: N/A
Luminaire Lumens: 3675.0 lumens
Efficiency: N/A
Efficacy: 112.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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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CATALOG NUMBER: 24FC22-40-UNV-L83050-S-CA08-W2A-U-3000K

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	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1737	1737	1737
5°	1736	1731	1742
10°	1729	1729	1742
15°	1712	1720	1738
20°	1690	1706	1733
25°	1658	1690	1723
30°	1621	1670	1708
35°	1586	1643	1695
40°	1532	1616	1675
45°	1482	1584	1657
50°	1424	1554	1637
55°	1361	1525	1621
60°	1297	1502	1618
65°	1215	1475	1628
70°	1125	1483	1672
75°	1007	1511	1766
80°	814	1601	1728
85°	613	1406	1369



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	122.2	3.3
10°-20°	349.2	9.5
20°-30°	525.0	14.3
30°-40°	625.3	17.0
40°-50°	640.0	17.4
50°-60°	576.2	15.7
60°-70°	452.5	12.3
70°-80°	293.7	8.0
80°-90°	90.8	2.5
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°	996.4	27.1
0°-40°	1621.8	44.1
0°-60°	2838.0	77.2
0°-90°	3675.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3675.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1291	1291	1291	1291	1291	
5°	1285	1288	1282	1289	1290	122
15°	1229	1233	1235	1246	1248	347
25°	1117	1126	1138	1157	1160	515
35°	965	977	1000	1025	1032	602
45°	779	797	832	864	871	600
55°	580	606	650	684	691	520
65°	382	411	463	502	511	380
75°	194	231	291	330	340	205
85°	40	74	91	89	89	48
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1291.1	1291.1	1291.1	1291.1	1291.1
2.5°	1292.2	1292.2	1286.4	1292.2	1293.4
5°	1285.2	1287.5	1281.7	1288.7	1289.9
7.5°	1278.2	1278.2	1274.7	1281.7	1282.9
10°	1265.4	1266.5	1265.4	1273.5	1274.7
12.5°	1249.0	1251.4	1252.5	1260.7	1261.9
15°	1229.2	1232.7	1235.0	1245.5	1247.9
17.5°	1207.0	1210.5	1216.3	1228.0	1230.4
20°	1180.2	1184.8	1191.8	1207.0	1210.5
22.5°	1151.0	1155.6	1167.3	1181.3	1187.2
25°	1117.1	1126.5	1138.1	1156.8	1160.3
27.5°	1083.3	1091.4	1106.6	1126.5	1131.1
30°	1043.6	1056.4	1075.1	1094.9	1099.6
32.5°	1005.1	1017.9	1040.1	1061.1	1066.9
35°	965.4	977.0	1000.4	1024.9	1031.9
37.5°	919.8	935.0	960.7	985.2	992.2
40°	872.0	890.7	919.8	945.5	953.7
42.5°	826.5	846.3	875.5	903.5	912.8
45°	778.6	797.3	832.3	863.8	870.8
47.5°	729.6	750.6	787.9	819.5	831.1
50°	680.5	702.7	742.4	775.1	782.1
52.5°	631.5	654.9	696.9	731.9	735.4
55°	580.2	605.8	650.2	684.0	691.1
57.5°	533.5	555.6	603.5	638.5	646.7
60°	482.1	506.6	558.0	590.7	601.2
62.5°	433.1	458.8	512.5	545.1	554.5
65°	381.7	410.9	463.4	501.9	511.3
67.5°	337.4	365.4	421.4	458.8	468.1
70°	286.0	317.5	377.0	415.6	424.9
72.5°	241.6	274.3	333.9	371.2	385.2
75°	193.8	231.1	290.7	330.4	339.7
77.5°	147.1	190.3	251.0	281.3	281.3
80°	105.1	150.6	206.6	220.6	223.0
82.5°	68.9	113.2	152.9	151.8	151.8
85°	39.7	73.5	91.1	88.7	88.7
87.5°	15.2	30.4	32.7	32.7	31.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)