

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: P313923

Luminaire Tested: **24FCZ2-40-UNV-L83050-CA125-W2A-U-4500K**

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: P313923
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-CA125-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" ACRYLIC SHEET
Light Source: (168) 4500K 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

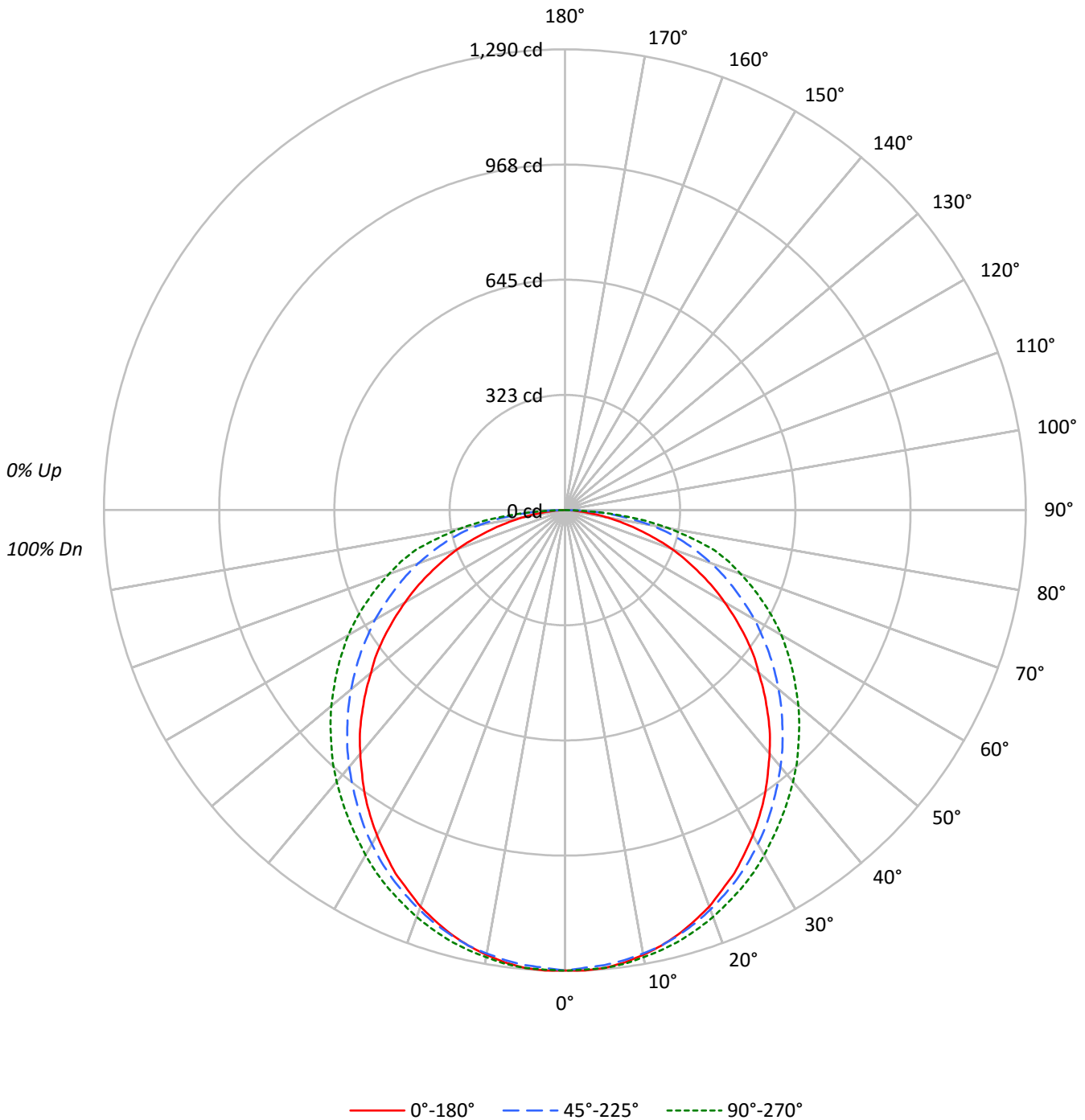
Lumens per Lamp: N/A
Luminaire Lumens: 3909.0 lumens
Efficiency: N/A
Efficacy: 114.0 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 34.3
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°	1735	1735	1735
5°	1738	1727	1738
10°	1728	1722	1736
15°	1713	1716	1738
20°	1692	1705	1736
25°	1665	1692	1735
30°	1634	1678	1733
35°	1602	1662	1734
40°	1565	1649	1745
45°	1528	1639	1760
50°	1482	1634	1786
55°	1445	1637	1822
60°	1389	1651	1884
65°	1325	1668	1953
70°	1255	1720	2061
75°	1119	1794	2252
80°	955	1899	2301
85°	681	1882	2203



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	122.0	3.1
10°-20°	348.9	8.9
20°-30°	526.9	13.5
30°-40°	635.1	16.2
40°-50°	666.7	17.1
50°-60°	623.7	16.0
60°-70°	515.1	13.2
70°-80°	351.0	9.0
80°-90°	119.7	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°	997.8	25.5
0°-40°	1632.8	41.8
0°-60°	2923.3	74.8
0°-90°	3909.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3909.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1289	1289	1289	1289	1289	
5°	1287	1285	1279	1287	1287	122
15°	1230	1231	1232	1245	1248	347
25°	1122	1127	1140	1162	1168	516
35°	975	986	1012	1045	1056	609
45°	803	820	861	908	925	619
55°	616	641	698	755	777	550
65°	416	451	524	590	614	413
75°	215	265	345	410	433	230
85°	44	87	122	138	143	55
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1289.2	1289.2	1289.2	1289.2	1289.2
2.5°	1290.5	1289.2	1282.7	1289.2	1287.9
5°	1286.6	1285.3	1278.8	1286.6	1286.6
7.5°	1277.5	1277.5	1271.0	1280.1	1281.4
10°	1264.5	1264.5	1260.6	1271.0	1271.0
12.5°	1248.9	1248.9	1248.9	1259.3	1260.6
15°	1229.5	1230.8	1232.1	1245.1	1247.7
17.5°	1206.2	1208.7	1212.6	1228.2	1230.8
20°	1181.5	1184.1	1190.6	1208.7	1212.6
22.5°	1150.4	1156.9	1165.9	1186.7	1190.6
25°	1121.8	1127.0	1140.0	1162.1	1168.5
27.5°	1086.8	1094.6	1111.5	1134.8	1143.9
30°	1051.8	1059.6	1080.3	1107.6	1115.4
32.5°	1014.2	1025.9	1047.9	1076.5	1085.5
35°	975.3	985.7	1011.6	1045.3	1055.7
37.5°	932.5	946.8	975.3	1011.6	1024.6
40°	891.0	906.6	939.0	977.9	993.5
42.5°	849.5	865.1	901.4	945.5	961.0
45°	802.8	819.7	861.2	907.9	924.7
47.5°	756.1	776.9	822.3	871.5	889.7
50°	708.1	731.5	780.8	832.6	853.4
52.5°	665.3	687.4	739.3	795.0	814.5
55°	616.0	640.7	697.8	754.8	776.9
57.5°	565.5	592.7	653.7	715.9	738.0
60°	516.2	546.0	613.5	675.7	700.3
62.5°	468.2	498.0	568.1	632.9	657.5
65°	416.3	451.3	524.0	590.1	613.5
67.5°	367.0	404.6	481.2	546.0	569.4
70°	319.0	355.4	437.1	500.6	524.0
72.5°	267.2	308.7	390.4	456.5	481.2
75°	215.3	264.6	345.0	409.8	433.2
77.5°	167.3	217.9	298.3	351.5	363.1
80°	123.2	175.1	245.1	282.7	297.0
82.5°	79.1	131.0	186.8	214.0	225.7
85°	44.1	86.9	121.9	137.5	142.7
87.5°	18.2	37.6	49.3	55.8	55.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)