

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: P313897

Luminaire Tested: **24FCZ2-40HE-UNV-L83050-CA125-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: P313897  
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: 24FCZ2-40HE-UNV-L83050-CA125-W2A-U-4000K  
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" ACRYLIC SHEET  
Light Source: (336) 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**

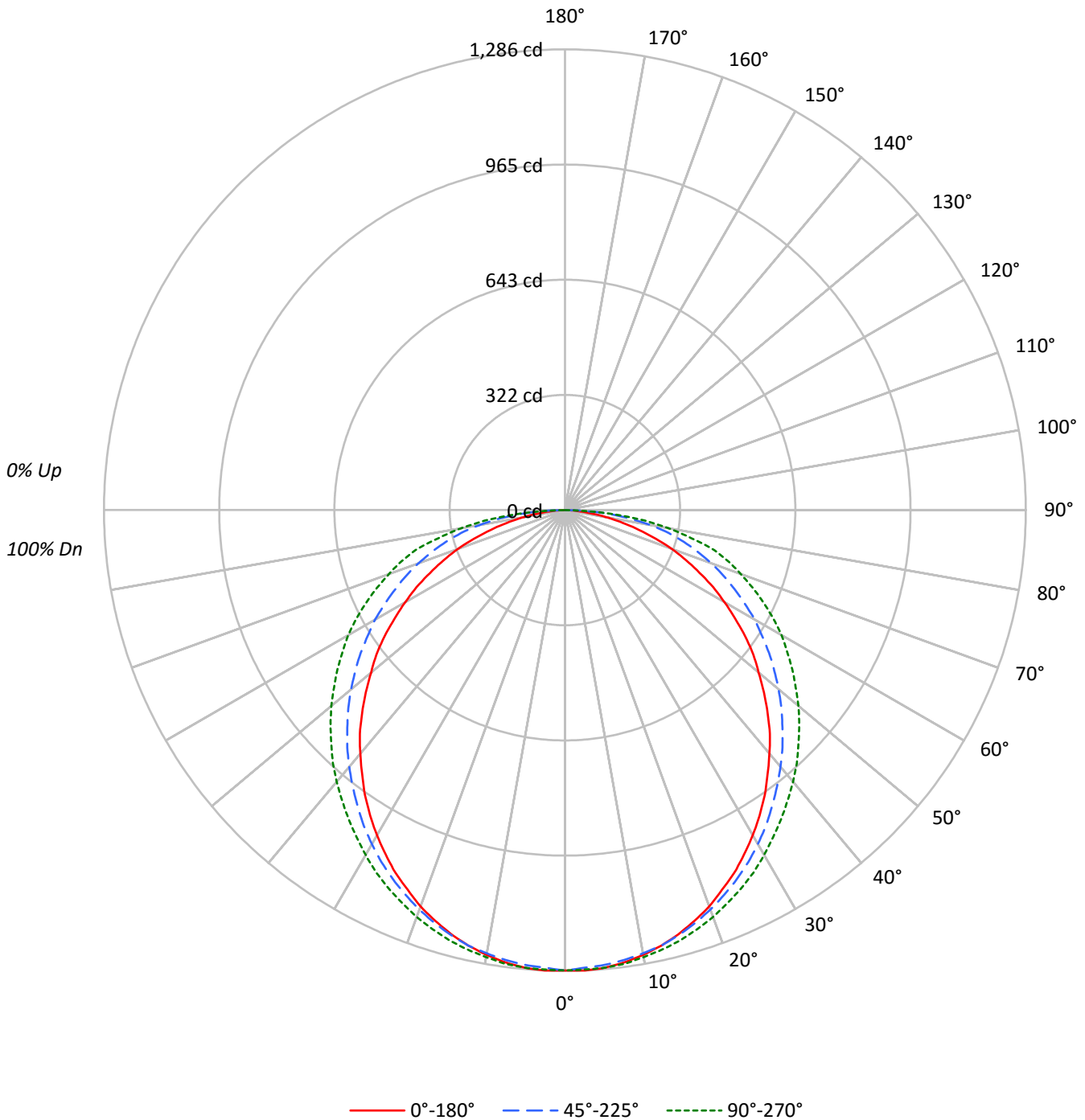
Lumens per Lamp: N/A  
Luminaire Lumens: 3896.0 lumens  
Efficiency: N/A  
Efficacy: 125.3 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 31.1  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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°	1729	1729	1729
5°	1732	1721	1732
10°	1722	1717	1731
15°	1707	1711	1732
20°	1686	1699	1731
25°	1660	1687	1729
30°	1629	1673	1727
35°	1597	1656	1728
40°	1560	1644	1739
45°	1522	1633	1754
50°	1477	1629	1780
55°	1440	1631	1816
60°	1385	1645	1878
65°	1321	1663	1947
70°	1251	1714	2054
75°	1116	1787	2244
80°	951	1893	2294
85°	678	1876	2195



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	121.6	3.1
10°-20°	347.7	8.9
20°-30°	525.2	13.5
30°-40°	632.9	16.2
40°-50°	664.5	17.1
50°-60°	621.7	16.0
60°-70°	513.4	13.2
70°-80°	349.8	9.0
80°-90°	119.3	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°	994.4	25.5
0°-40°	1627.4	41.8
0°-60°	2913.5	74.8
0°-90°	3896.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3896.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1285	1285	1285	1285	1285	
5°	1282	1281	1274	1282	1282	122
15°	1225	1227	1228	1241	1244	345
25°	1118	1123	1136	1158	1165	514
35°	972	982	1008	1042	1052	607
45°	800	817	858	905	922	617
55°	614	639	695	752	774	548
65°	415	450	522	588	611	412
75°	215	264	344	408	432	229
85°	44	87	122	137	142	55
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1284.9	1284.9	1284.9	1284.9	1284.9
2.5°	1286.2	1284.9	1278.4	1284.9	1283.6
5°	1282.3	1281.0	1274.5	1282.3	1282.3
7.5°	1273.2	1273.2	1266.8	1275.8	1277.1
10°	1260.3	1260.3	1256.4	1266.8	1266.8
12.5°	1244.8	1244.8	1244.8	1255.1	1256.4
15°	1225.4	1226.7	1228.0	1240.9	1243.5
17.5°	1202.1	1204.7	1208.6	1224.1	1226.7
20°	1177.6	1180.2	1186.6	1204.7	1208.6
22.5°	1146.6	1153.0	1162.1	1182.7	1186.6
25°	1118.1	1123.3	1136.2	1158.2	1164.7
27.5°	1083.2	1091.0	1107.8	1131.0	1140.1
30°	1048.3	1056.1	1076.8	1103.9	1111.7
32.5°	1010.8	1022.5	1044.4	1072.9	1081.9
35°	972.1	982.4	1008.2	1041.9	1052.2
37.5°	929.4	943.6	972.1	1008.2	1021.2
40°	888.0	903.5	935.9	974.6	990.1
42.5°	846.7	862.2	898.4	942.3	957.8
45°	800.1	816.9	858.3	904.8	921.6
47.5°	753.6	774.3	819.5	868.6	886.7
50°	705.8	729.0	778.2	829.9	850.5
52.5°	663.1	685.1	736.8	792.4	811.8
55°	614.0	638.6	695.4	752.3	774.3
57.5°	563.6	590.7	651.5	713.5	735.5
60°	514.5	544.2	611.4	673.5	698.0
62.5°	466.6	496.4	566.2	630.8	655.4
65°	414.9	449.8	522.2	588.1	611.4
67.5°	365.8	403.3	479.6	544.2	567.5
70°	318.0	354.2	435.6	499.0	522.2
72.5°	266.3	307.6	389.1	455.0	479.6
75°	214.6	263.7	343.8	408.5	431.7
77.5°	166.7	217.2	297.3	350.3	361.9
80°	122.8	174.5	244.3	281.8	296.0
82.5°	78.8	130.6	186.1	213.3	224.9
85°	43.9	86.6	121.5	137.0	142.2
87.5°	18.1	37.5	49.1	55.6	55.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)