

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: P311355

Luminaire Tested: **24FCZ2-40HE-UNV-L82765-S-CA125-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: P311355  
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: 24FCZ2-40HE-UNV-L82765-S-CA125-W2A-U-3000K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" ACRYLIC SHEET  
Light Source: (336) 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**

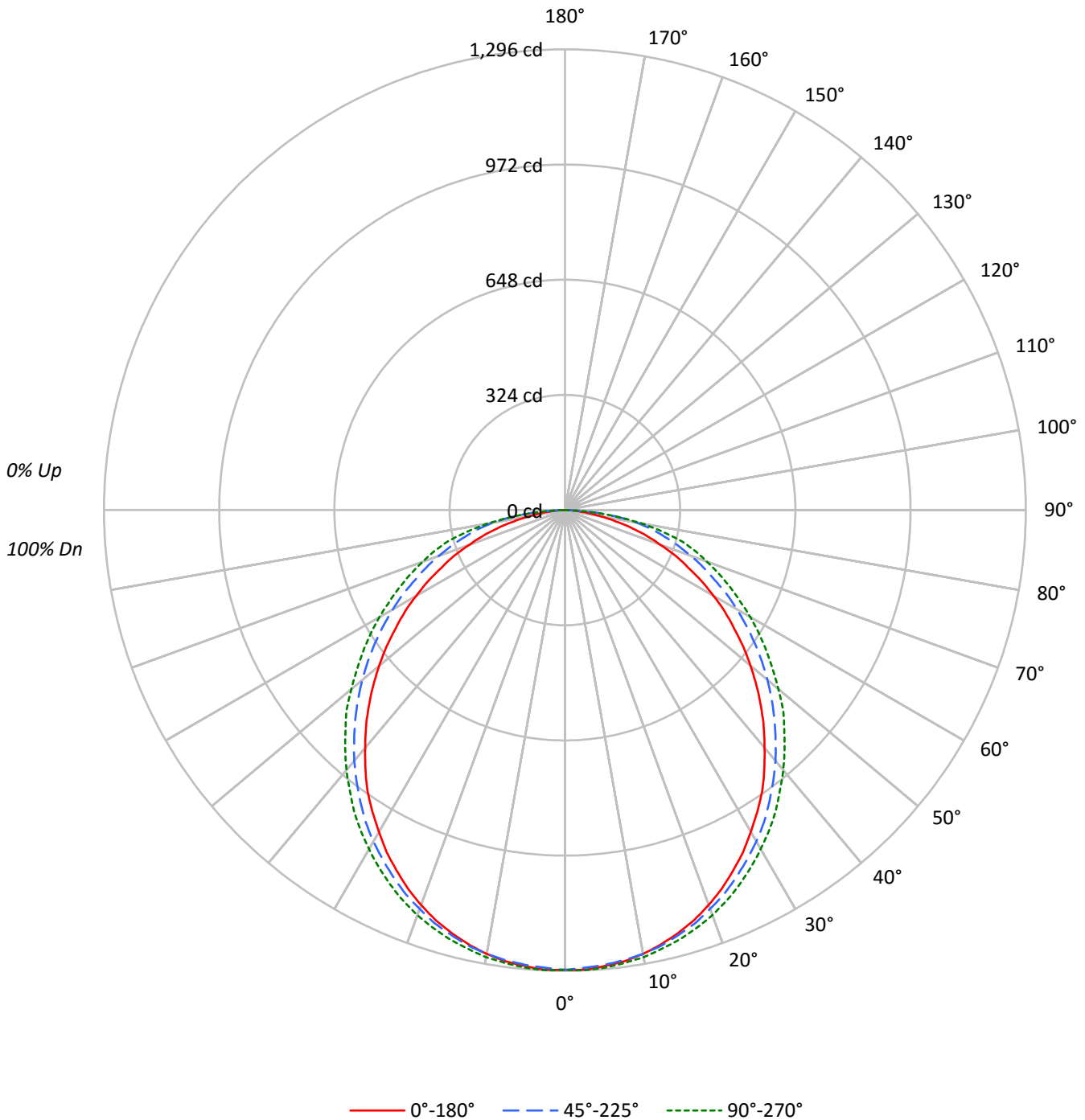
Lumens per Lamp: N/A  
Luminaire Lumens: 3681.0 lumens  
Efficiency: N/A  
Efficacy: 121.9 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 30.2  
Input Voltage (V): NR  
Input Current (A<sub>in</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	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°	1740	1740	1740
5°	1739	1734	1745
10°	1732	1732	1744
15°	1715	1723	1741
20°	1693	1709	1736
25°	1661	1692	1725
30°	1624	1673	1711
35°	1588	1646	1698
40°	1534	1618	1678
45°	1484	1586	1660
50°	1427	1557	1640
55°	1363	1528	1624
60°	1299	1504	1620
65°	1217	1478	1630
70°	1127	1486	1674
75°	1009	1513	1769
80°	815	1604	1730
85°	614	1408	1372



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	122.4	3.3
10°-20°	349.8	9.5
20°-30°	525.8	14.3
30°-40°	626.4	17.0
40°-50°	641.1	17.4
50°-60°	577.1	15.7
60°-70°	453.2	12.3
70°-80°	294.2	8.0
80°-90°	91.0	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°	998.1	27.1
0°-40°	1624.4	44.1
0°-60°	2842.6	77.2
0°-90°	3681.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3681.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1293	1293	1293	1293	1293	
5°	1287	1290	1284	1291	1292	122
15°	1231	1235	1237	1248	1250	347
25°	1119	1128	1140	1159	1162	515
35°	967	979	1002	1027	1034	603
45°	780	799	834	865	872	601
55°	581	607	651	685	692	521
65°	382	412	464	503	512	381
75°	194	232	291	331	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°	1293.2	1293.2	1293.2	1293.2	1293.2
2.5°	1294.3	1294.3	1288.5	1294.3	1295.5
5°	1287.3	1289.7	1283.8	1290.8	1292.0
7.5°	1280.3	1280.3	1276.8	1283.8	1285.0
10°	1267.4	1268.6	1267.4	1275.6	1276.8
12.5°	1251.1	1253.4	1254.6	1262.8	1263.9
15°	1231.2	1234.7	1237.0	1247.6	1249.9
17.5°	1209.0	1212.5	1218.3	1230.0	1232.4
20°	1182.1	1186.8	1193.8	1209.0	1212.5
22.5°	1152.9	1157.5	1169.2	1183.3	1189.1
25°	1118.9	1128.3	1140.0	1158.7	1162.2
27.5°	1085.0	1093.2	1108.4	1128.3	1133.0
30°	1045.3	1058.1	1076.9	1096.7	1101.4
32.5°	1006.7	1019.6	1041.8	1062.8	1068.7
35°	966.9	978.6	1002.0	1026.6	1033.6
37.5°	921.3	936.5	962.3	986.8	993.8
40°	873.4	892.1	921.3	947.1	955.3
42.5°	827.8	847.7	876.9	905.0	914.3
45°	779.9	798.6	833.7	865.2	872.2
47.5°	730.8	751.8	789.2	820.8	832.5
50°	681.7	703.9	743.6	776.4	783.4
52.5°	632.5	655.9	698.0	733.1	736.6
55°	581.1	606.8	651.3	685.2	692.2
57.5°	534.3	556.5	604.5	639.6	647.7
60°	482.9	507.4	558.9	591.6	602.1
62.5°	433.8	459.5	513.3	546.0	555.4
65°	382.3	411.6	464.2	502.8	512.1
67.5°	337.9	366.0	422.1	459.5	468.9
70°	286.5	318.0	377.7	416.2	425.6
72.5°	242.0	274.8	334.4	371.8	385.8
75°	194.1	231.5	291.1	330.9	340.2
77.5°	147.3	190.6	251.4	281.8	281.8
80°	105.2	150.8	207.0	221.0	223.3
82.5°	69.0	113.4	153.2	152.0	152.0
85°	39.8	73.7	91.2	88.9	88.9
87.5°	15.2	30.4	32.7	32.7	31.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)