

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: P314307

Luminaire Tested: **24FCZ2-40-UNV-L83050-S-CP187-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: P314307  
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-CP187-W2A-U-4000K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.187" POLYCARB SHEET  
Light Source: (168) 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**

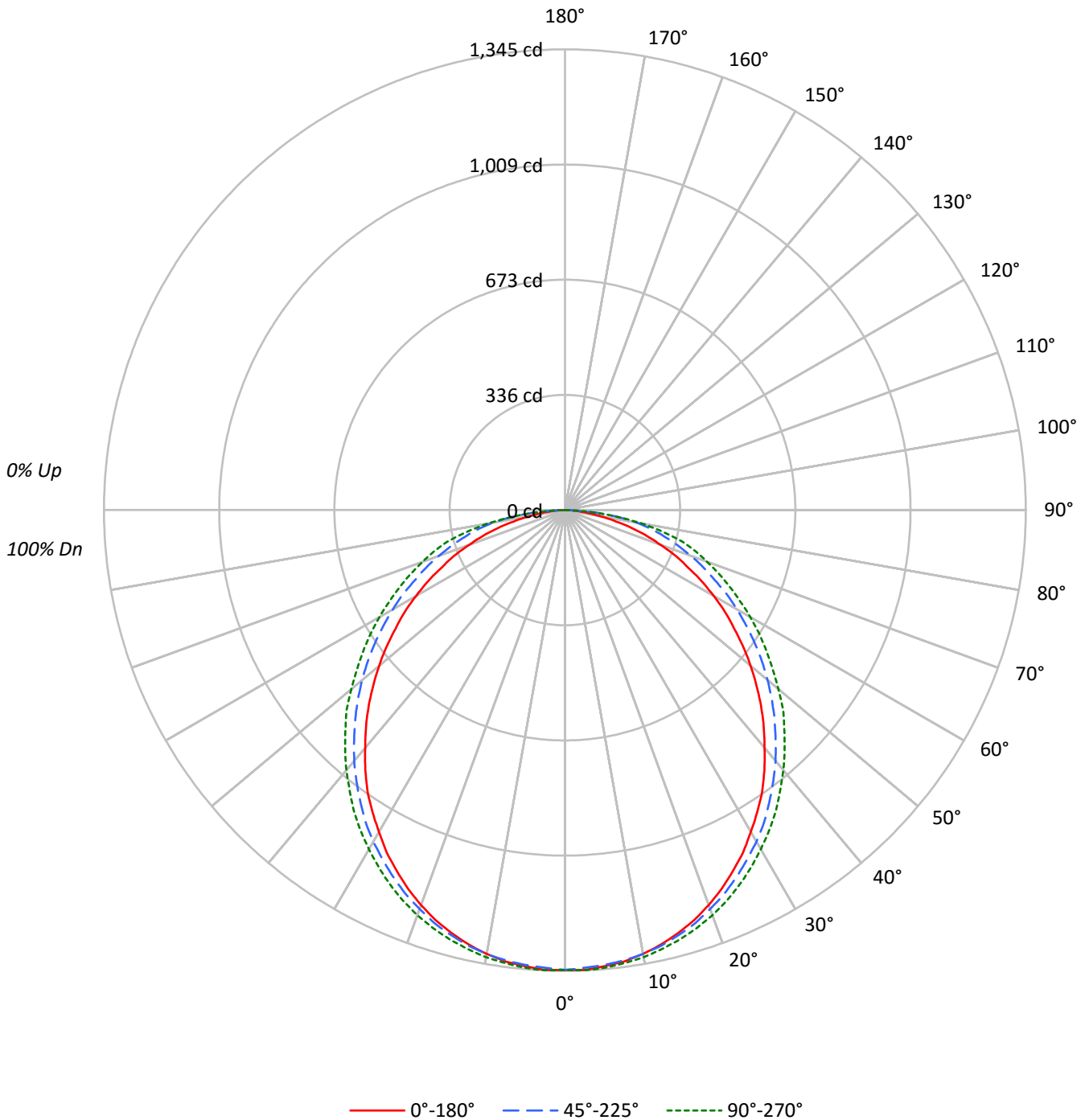
Lumens per Lamp: N/A  
Luminaire Lumens: 3821.0 lumens  
Efficiency: N/A  
Efficacy: 114.1 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 33.5  
Input Voltage (V): NR  
Input Current (A<sub>in</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°	1806	1806	1806
5°	1805	1800	1811
10°	1797	1797	1811
15°	1780	1789	1807
20°	1757	1774	1802
25°	1724	1757	1791
30°	1686	1737	1776
35°	1649	1708	1762
40°	1592	1680	1742
45°	1540	1647	1723
50°	1481	1616	1702
55°	1415	1586	1685
60°	1349	1561	1682
65°	1264	1534	1692
70°	1170	1542	1738
75°	1048	1571	1836
80°	846	1664	1796
85°	638	1462	1423



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	127.1	3.3
10°-20°	363.1	9.5
20°-30°	545.8	14.3
30°-40°	650.2	17.0
40°-50°	665.4	17.4
50°-60°	599.1	15.7
60°-70°	470.5	12.3
70°-80°	305.3	8.0
80°-90°	94.4	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°	1036.0	27.1
0°-40°	1686.2	44.1
0°-60°	2950.7	77.2
0°-90°	3821.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3821.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1342	1342	1342	1342	1342	
5°	1336	1339	1333	1340	1341	127
15°	1278	1282	1284	1295	1297	360
25°	1162	1171	1183	1203	1206	535
35°	1004	1016	1040	1066	1073	626
45°	810	829	865	898	905	624
55°	603	630	676	711	718	541
65°	397	427	482	522	532	395
75°	202	240	302	344	353	213
85°	41	76	95	92	92	50
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1342.3	1342.3	1342.3	1342.3	1342.3
2.5°	1343.6	1343.6	1337.5	1343.6	1344.8
5°	1336.3	1338.7	1332.6	1339.9	1341.1
7.5°	1329.0	1329.0	1325.4	1332.6	1333.8
10°	1315.6	1316.9	1315.6	1324.1	1325.4
12.5°	1298.6	1301.1	1302.3	1310.8	1312.0
15°	1278.0	1281.7	1284.1	1295.0	1297.4
17.5°	1255.0	1258.6	1264.7	1276.8	1279.2
20°	1227.0	1231.9	1239.2	1255.0	1258.6
22.5°	1196.7	1201.6	1213.7	1228.3	1234.3
25°	1161.5	1171.2	1183.3	1202.8	1206.4
27.5°	1126.3	1134.8	1150.6	1171.2	1176.1
30°	1085.0	1098.4	1117.8	1138.4	1143.3
32.5°	1045.0	1058.3	1081.4	1103.2	1109.3
35°	1003.7	1015.9	1040.1	1065.6	1072.9
37.5°	956.4	972.2	998.9	1024.4	1031.6
40°	906.6	926.0	956.4	983.1	991.6
42.5°	859.3	879.9	910.3	939.4	949.1
45°	809.5	829.0	865.4	898.1	905.4
47.5°	758.6	780.4	819.2	852.0	864.1
50°	707.6	730.6	771.9	805.9	813.2
52.5°	656.6	680.9	724.6	761.0	764.6
55°	603.2	629.9	676.0	711.2	718.5
57.5°	554.7	577.7	627.5	663.9	672.4
60°	501.3	526.7	580.1	614.1	625.1
62.5°	450.3	477.0	532.8	566.8	576.5
65°	396.9	427.2	481.8	521.9	531.6
67.5°	350.8	379.9	438.1	477.0	486.7
70°	297.4	330.1	392.0	432.1	441.8
72.5°	251.2	285.2	347.1	386.0	400.5
75°	201.5	240.3	302.2	343.5	353.2
77.5°	152.9	197.8	260.9	292.5	292.5
80°	109.2	156.6	214.8	229.4	231.8
82.5°	71.6	117.7	159.0	157.8	157.8
85°	41.3	76.5	94.7	92.2	92.2
87.5°	15.8	31.6	34.0	34.0	32.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)