

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: P313995

Luminaire Tested: **24FCZ2-50HE-UNV-L83050-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: P313995  
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: 24FCZ2-50HE-UNV-L83050-CA125-W2A-U-3000K  
Description: 2'X4' TROFFER LED MODULE, RIBBED 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**

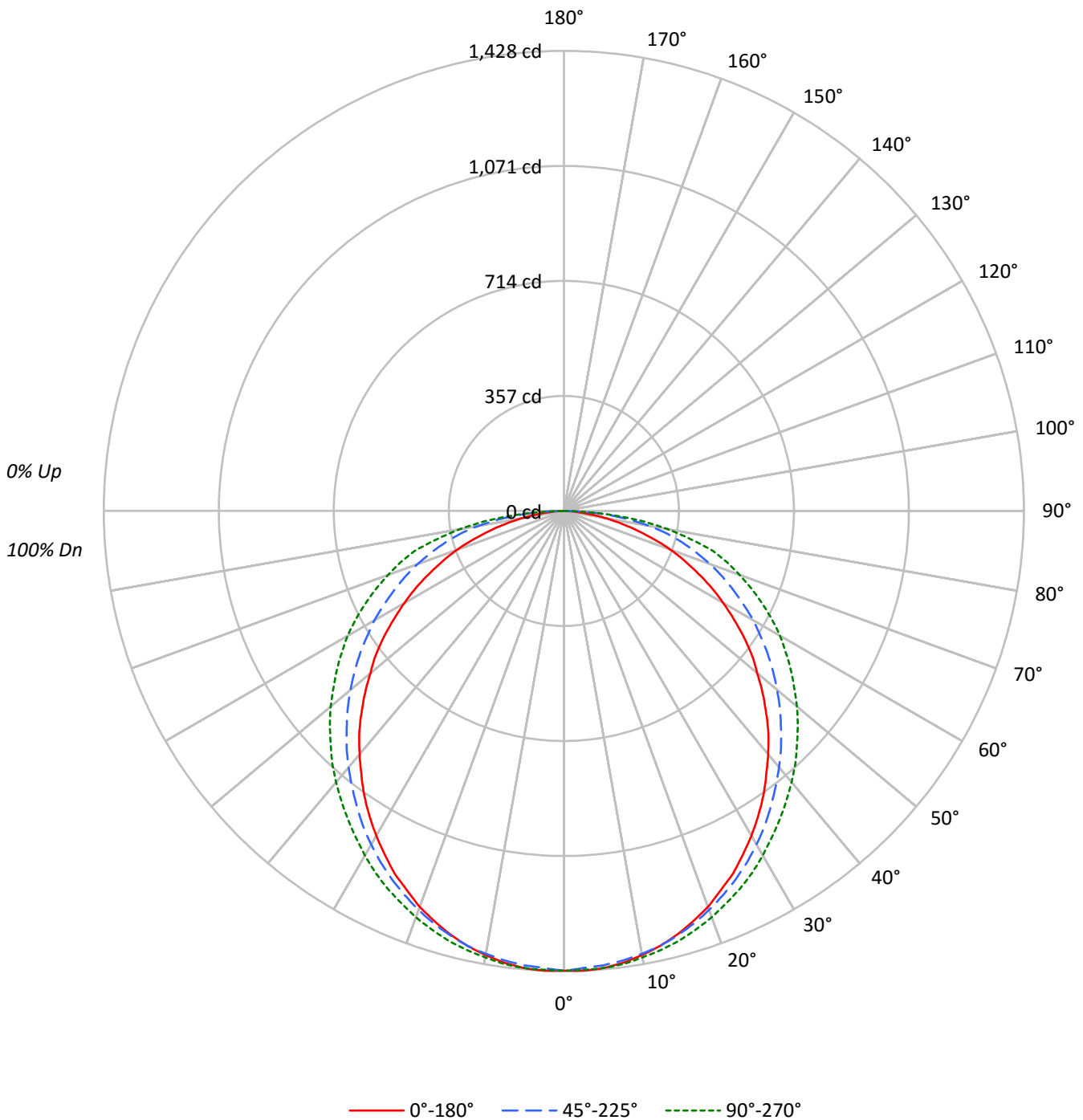
Lumens per Lamp: N/A  
Luminaire Lumens: 4327.0 lumens  
Efficiency: N/A  
Efficacy: 113.0 lumens/watt  
Spacing Criteria (0/90/45): 1.22 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 38.3  
Input Voltage (V): NR  
Input Current (A<sub>in</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°	1920	1920	1920
5°	1923	1912	1923
10°	1912	1906	1922
15°	1896	1900	1924
20°	1873	1887	1922
25°	1844	1873	1920
30°	1809	1858	1918
35°	1773	1839	1919
40°	1732	1826	1932
45°	1691	1814	1948
50°	1641	1809	1977
55°	1600	1812	2017
60°	1538	1827	2086
65°	1467	1847	2162
70°	1389	1903	2282
75°	1239	1985	2493
80°	1057	2102	2548
85°	753	2083	2438



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	135.0	3.1
10°-20°	386.2	8.9
20°-30°	583.3	13.5
30°-40°	703.0	16.2
40°-50°	738.0	17.1
50°-60°	690.4	16.0
60°-70°	570.2	13.2
70°-80°	388.5	9.0
80°-90°	132.5	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°	1104.5	25.5
0°-40°	1807.4	41.8
0°-60°	3235.8	74.8
0°-90°	4327.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4327.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1427	1427	1427	1427	1427	
5°	1424	1423	1416	1424	1424	135
15°	1361	1362	1364	1378	1381	384
25°	1242	1248	1262	1286	1294	571
35°	1080	1091	1120	1157	1169	675
45°	889	907	953	1005	1024	685
55°	682	709	772	836	860	609
65°	461	500	580	653	679	457
75°	238	293	382	454	480	254
85°	49	96	135	152	158	61
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1427.0	1427.0	1427.0	1427.0	1427.0
2.5°	1428.4	1427.0	1419.8	1427.0	1425.6
5°	1424.1	1422.7	1415.5	1424.1	1424.1
7.5°	1414.1	1414.1	1406.9	1417.0	1418.4
10°	1399.7	1399.7	1395.4	1406.9	1406.9
12.5°	1382.5	1382.5	1382.5	1394.0	1395.4
15°	1361.0	1362.4	1363.8	1378.2	1381.1
17.5°	1335.1	1338.0	1342.3	1359.5	1362.4
20°	1307.9	1310.7	1317.9	1338.0	1342.3
22.5°	1273.4	1280.6	1290.6	1313.6	1317.9
25°	1241.8	1247.6	1261.9	1286.3	1293.5
27.5°	1203.1	1211.7	1230.3	1256.2	1266.2
30°	1164.3	1172.9	1195.9	1226.0	1234.6
32.5°	1122.7	1135.6	1160.0	1191.6	1201.6
35°	1079.6	1091.1	1119.8	1157.1	1168.6
37.5°	1032.2	1048.0	1079.6	1119.8	1134.1
40°	986.3	1003.5	1039.4	1082.5	1099.7
42.5°	940.3	957.6	997.8	1046.6	1063.8
45°	888.6	907.3	953.3	1004.9	1023.6
47.5°	837.0	859.9	910.2	964.7	984.8
50°	783.8	809.7	864.2	921.7	944.6
52.5°	736.5	760.9	818.3	880.0	901.6
55°	681.9	709.2	772.4	835.5	859.9
57.5°	625.9	656.1	723.6	792.5	816.9
60°	571.4	604.4	679.0	748.0	775.2
62.5°	518.3	551.3	628.8	700.6	727.9
65°	460.8	499.6	580.0	653.2	679.0
67.5°	406.3	447.9	532.6	604.4	630.2
70°	353.2	393.4	483.8	554.1	580.0
72.5°	295.7	341.7	432.1	505.3	532.6
75°	238.3	292.9	381.9	453.7	479.5
77.5°	185.2	241.2	330.2	389.1	402.0
80°	136.4	193.8	271.3	313.0	328.8
82.5°	87.6	145.0	206.7	236.9	249.8
85°	48.8	96.2	134.9	152.2	157.9
87.5°	20.1	41.6	54.6	61.7	61.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)