

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: P314036

Luminaire Tested: **24FCZ2-50-UNV-L83050-CP250-W2A-U-3500K**

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: P314036  
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: 24FCZ2-50-UNV-L83050-CP250-W2A-U-3500K  
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.250" POLYCARB SHEET  
Light Source: (168) 3500K 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**

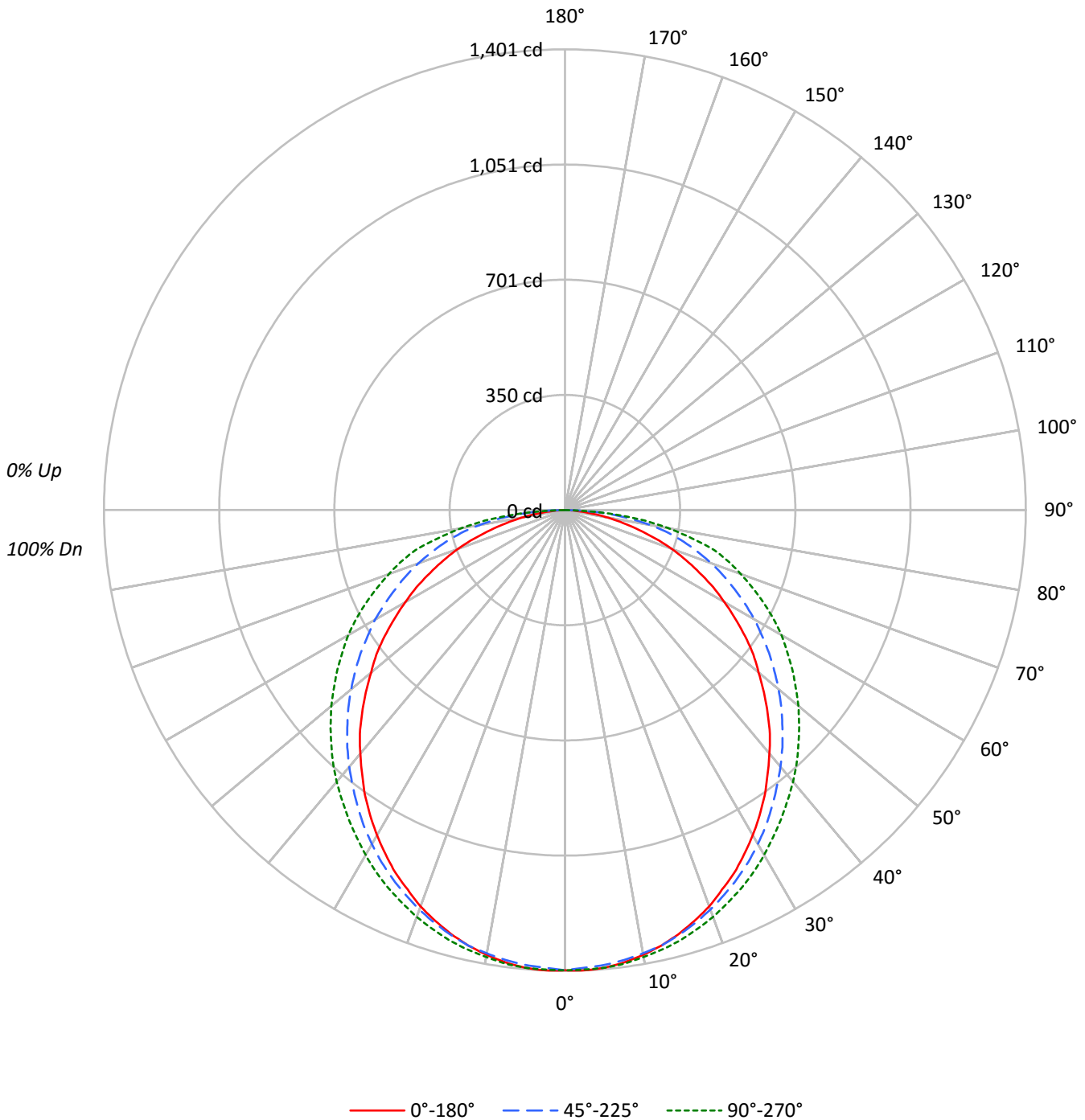
Lumens per Lamp: N/A  
Luminaire Lumens: 4244.0 lumens  
Efficiency: N/A  
Efficacy: 99.4 lumens/watt  
Spacing Criteria (0/90/45): 1.22 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 42.7  
Input Voltage (V): NR  
Input Current (A<sub>in</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	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					100			
1	108	103	98	94	105	100	96	92	96	92	89	92	89	87	88	86	84	82					82			
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67					67			
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56					56			
4	81	68	59	52	79	67	58	52	64	57	51	62	56	50	60	54	50	47					47			
5	74	61	52	45	72	60	51	44	58	50	44	56	49	43	54	48	43	41					41			
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36					36			
7	64	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31					31			
8	59	45	37	31	57	45	36	30	43	36	30	42	35	30	41	34	30	28					28			
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25					25			
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23					23			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	1883	1883	1883
5°	1887	1875	1887
10°	1876	1870	1885
15°	1859	1863	1887
20°	1837	1851	1885
25°	1808	1837	1883
30°	1774	1822	1881
35°	1739	1804	1883
40°	1699	1791	1894
45°	1658	1779	1910
50°	1609	1774	1939
55°	1569	1777	1978
60°	1508	1792	2046
65°	1439	1811	2120
70°	1363	1867	2238
75°	1215	1947	2445
80°	1037	2062	2499
85°	739	2044	2391



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	132.5	3.1
10°-20°	378.8	8.9
20°-30°	572.1	13.5
30°-40°	689.5	16.2
40°-50°	723.8	17.1
50°-60°	677.2	16.0
60°-70°	559.2	13.2
70°-80°	381.1	9.0
80°-90°	130.0	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°	1083.3	25.5
0°-40°	1772.7	41.8
0°-60°	3173.7	74.8
0°-90°	4244.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4244.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1400	1400	1400	1400	1400	
5°	1397	1395	1388	1397	1397	133
15°	1335	1336	1338	1352	1355	376
25°	1218	1224	1238	1262	1269	560
35°	1059	1070	1098	1135	1146	662
45°	872	890	935	986	1004	672
55°	669	696	758	820	843	597
65°	452	490	569	641	666	448
75°	234	287	375	445	470	249
85°	48	94	132	149	155	60
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1399.6	1399.6	1399.6	1399.6	1399.6
2.5°	1401.0	1399.6	1392.6	1399.6	1398.2
5°	1396.8	1395.4	1388.4	1396.8	1396.8
7.5°	1387.0	1387.0	1379.9	1389.8	1391.2
10°	1372.9	1372.9	1368.7	1379.9	1379.9
12.5°	1356.0	1356.0	1356.0	1367.2	1368.7
15°	1334.9	1336.3	1337.7	1351.8	1354.6
17.5°	1309.5	1312.3	1316.6	1333.5	1336.3
20°	1282.8	1285.6	1292.6	1312.3	1316.6
22.5°	1249.0	1256.0	1265.9	1288.4	1292.6
25°	1218.0	1223.6	1237.7	1261.6	1268.7
27.5°	1180.0	1188.4	1206.7	1232.1	1241.9
30°	1142.0	1150.4	1172.9	1202.5	1211.0
32.5°	1101.1	1113.8	1137.7	1168.7	1178.6
35°	1058.9	1070.1	1098.3	1134.9	1146.2
37.5°	1012.4	1027.9	1058.9	1098.3	1112.4
40°	967.4	984.2	1019.5	1061.7	1078.6
42.5°	922.3	939.2	978.6	1026.5	1043.4
45°	871.6	889.9	935.0	985.7	1004.0
47.5°	820.9	843.4	892.7	946.2	965.9
50°	768.8	794.2	847.7	904.0	926.5
52.5°	722.3	746.3	802.6	863.2	884.3
55°	668.8	695.6	757.5	819.5	843.4
57.5°	613.9	643.5	709.7	777.3	801.2
60°	560.4	592.8	666.0	733.6	760.4
62.5°	508.3	540.7	616.7	687.1	713.9
65°	452.0	490.0	568.9	640.7	666.0
67.5°	398.5	439.3	522.4	592.8	618.1
70°	346.4	385.8	474.5	543.5	568.9
72.5°	290.1	335.1	423.8	495.6	522.4
75°	233.7	287.2	374.6	445.0	470.3
77.5°	181.6	236.6	323.9	381.6	394.3
80°	133.8	190.1	266.1	307.0	322.5
82.5°	85.9	142.2	202.8	232.3	245.0
85°	47.9	94.3	132.4	149.3	154.9
87.5°	19.7	40.8	53.5	60.5	60.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)