

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: P313916

Luminaire Tested: **24FCZ2-40-UNV-L83050-CA08-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: P313916  
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: 24FCZ2-40-UNV-L83050-CA08-W2A-U-3500K  
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.08" ACRYLIC 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**

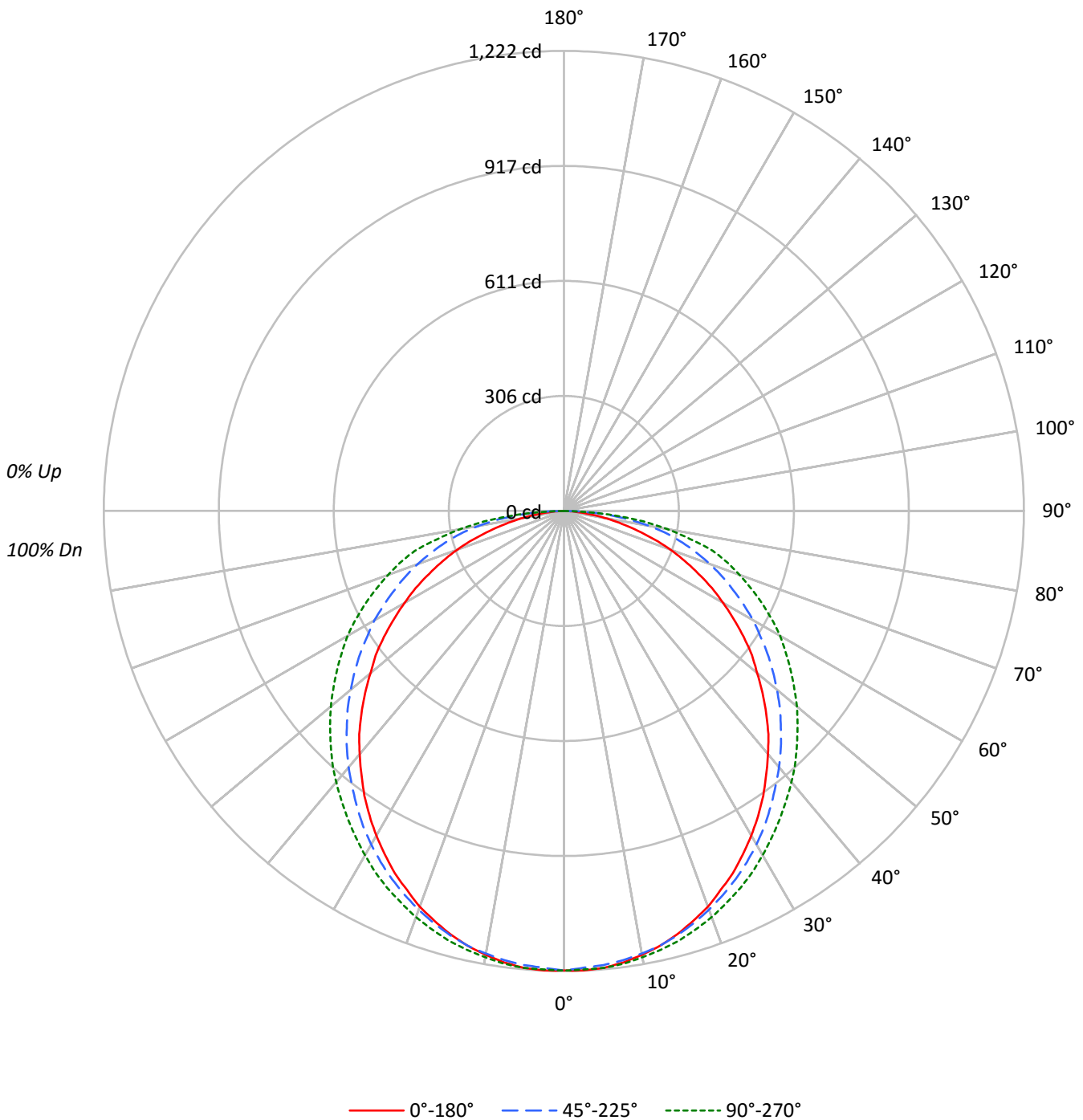
Lumens per Lamp: N/A  
Luminaire Lumens: 3701.0 lumens  
Efficiency: N/A  
Efficacy: 113.2 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 32.7  
Input Voltage (V): NR  
Input Current (A<sub>in</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	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°	1642	1642	1642
5°	1645	1635	1645
10°	1636	1631	1644
15°	1622	1625	1645
20°	1602	1614	1644
25°	1577	1602	1643
30°	1547	1589	1641
35°	1517	1573	1642
40°	1482	1561	1652
45°	1446	1551	1666
50°	1403	1547	1691
55°	1368	1550	1725
60°	1315	1563	1784
65°	1255	1579	1849
70°	1188	1628	1952
75°	1059	1698	2132
80°	904	1798	2179
85°	644	1782	2086



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	115.5	3.1
10°-20°	330.3	8.9
20°-30°	498.9	13.5
30°-40°	601.3	16.2
40°-50°	631.2	17.1
50°-60°	590.5	16.0
60°-70°	487.7	13.2
70°-80°	332.3	9.0
80°-90°	113.3	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°	944.7	25.5
0°-40°	1545.9	41.8
0°-60°	2767.7	74.8
0°-90°	3701.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3701.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1221	1221	1221	1221	1221	
5°	1218	1217	1211	1218	1218	116
15°	1164	1165	1166	1179	1181	328
25°	1062	1067	1079	1100	1106	489
35°	923	933	958	990	1000	577
45°	760	776	815	860	876	586
55°	583	607	661	715	736	521
65°	394	427	496	559	581	391
75°	204	250	327	388	410	217
85°	42	82	115	130	135	52
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1220.6	1220.6	1220.6	1220.6	1220.6
2.5°	1221.8	1220.6	1214.4	1220.6	1219.3
5°	1218.1	1216.9	1210.7	1218.1	1218.1
7.5°	1209.5	1209.5	1203.4	1212.0	1213.2
10°	1197.2	1197.2	1193.5	1203.4	1203.4
12.5°	1182.5	1182.5	1182.5	1192.3	1193.5
15°	1164.1	1165.3	1166.5	1178.8	1181.3
17.5°	1142.0	1144.4	1148.1	1162.8	1165.3
20°	1118.6	1121.1	1127.2	1144.4	1148.1
22.5°	1089.2	1095.3	1103.9	1123.6	1127.2
25°	1062.2	1067.1	1079.3	1100.2	1106.4
27.5°	1029.0	1036.4	1052.3	1074.4	1083.0
30°	995.8	1003.2	1022.9	1048.6	1056.0
32.5°	960.2	971.3	992.2	1019.2	1027.8
35°	923.4	933.2	957.8	989.7	999.5
37.5°	882.9	896.4	923.4	957.8	970.1
40°	843.6	858.3	889.0	925.9	940.6
42.5°	804.3	819.0	853.4	895.2	909.9
45°	760.1	776.0	815.3	859.5	875.5
47.5°	715.9	735.5	778.5	825.2	842.4
50°	670.4	692.5	739.2	788.3	808.0
52.5°	629.9	650.8	699.9	752.7	771.1
55°	583.3	606.6	660.6	714.7	735.5
57.5°	535.4	561.2	618.9	677.8	698.7
60°	488.7	517.0	580.8	639.7	663.1
62.5°	443.3	471.5	537.8	599.2	622.6
65°	394.2	427.3	496.1	558.7	580.8
67.5°	347.5	383.1	455.6	517.0	539.1
70°	302.1	336.5	413.8	474.0	496.1
72.5°	253.0	292.2	369.6	432.2	455.6
75°	203.8	250.5	326.6	388.0	410.1
77.5°	158.4	206.3	282.4	332.8	343.8
80°	116.7	165.8	232.1	267.7	281.2
82.5°	74.9	124.0	176.8	202.6	213.7
85°	41.7	82.3	115.4	130.2	135.1
87.5°	17.2	35.6	46.7	52.8	52.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)