

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: P313760

Luminaire Tested: **24FCZ2-70HE-UNV-L83050-RDP-CP250-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: P313760  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: 24FCZ2-70HE-UNV-L83050-RDP-CP250-W2A-U-3000K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" POLYCARB 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**

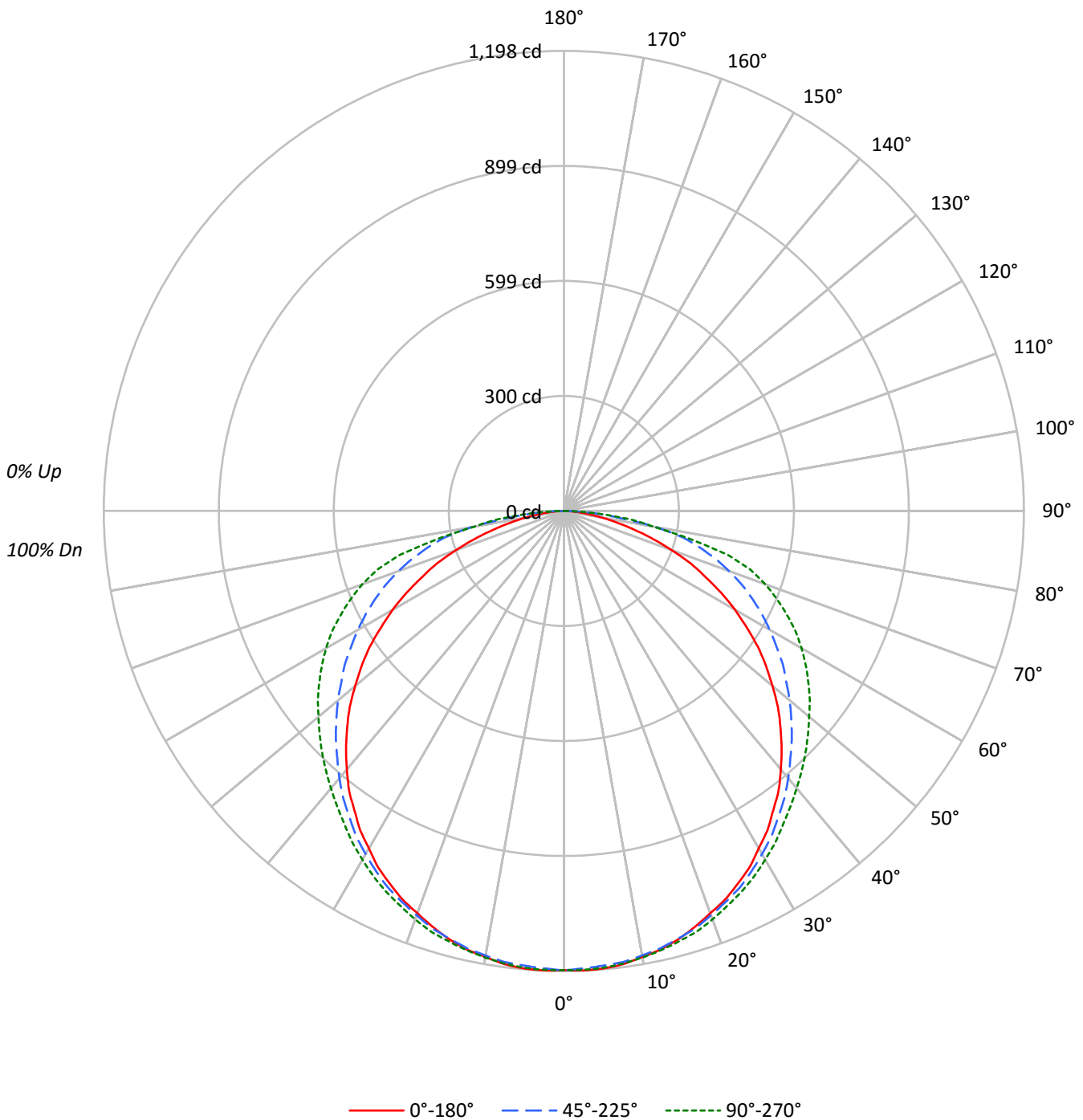
Lumens per Lamp: N/A  
Luminaire Lumens: 3803.0 lumens  
Efficiency: N/A  
Efficacy: 66.0 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 57.6  
Input Voltage (V): NR  
Input Current (A<sub>in</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	93	89	92	89	87	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

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

	0°	45°	90°
0°	1609	1609	1609
5°	1615	1605	1613
10°	1611	1606	1613
15°	1608	1605	1616
20°	1596	1604	1621
25°	1591	1608	1624
30°	1577	1603	1629
35°	1562	1599	1636
40°	1544	1597	1657
45°	1518	1597	1694
50°	1485	1607	1745
55°	1447	1633	1823
60°	1386	1665	1924
65°	1297	1724	2042
70°	1180	1803	2197
75°	1000	1902	2295
80°	790	1915	1857
85°	582	1456	1630



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	113.4	3.0
10°-20°	326.5	8.6
20°-30°	499.3	13.1
30°-40°	610.4	16.0
40°-50°	650.5	17.1
50°-60°	622.0	16.4
60°-70°	526.9	13.9
70°-80°	354.1	9.3
80°-90°	99.9	2.6
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°	939.2	24.7
0°-40°	1549.6	40.7
0°-60°	2822.1	74.2
0°-90°	3803.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3803.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1196	1196	1196	1196	1196	
5°	1196	1194	1188	1194	1194	114
15°	1154	1154	1152	1162	1160	325
25°	1071	1075	1083	1092	1094	494
35°	951	958	973	992	996	596
45°	798	811	839	875	890	615
55°	617	640	696	751	777	549
65°	407	449	541	613	641	405
75°	192	262	366	428	441	206
85°	38	77	94	102	106	47
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1195.9	1195.9	1195.9	1195.9	1195.9
2.5°	1197.8	1197.8	1192.2	1195.9	1195.9
5°	1195.9	1194.0	1188.4	1194.0	1194.0
7.5°	1190.3	1188.4	1184.6	1190.3	1188.4
10°	1179.0	1179.0	1175.2	1180.8	1180.8
12.5°	1169.5	1167.6	1165.8	1173.3	1171.4
15°	1154.4	1154.4	1152.5	1162.0	1160.1
17.5°	1135.6	1137.5	1139.3	1146.9	1148.8
20°	1114.8	1118.6	1120.5	1131.8	1131.8
22.5°	1096.0	1097.8	1101.6	1112.9	1112.9
25°	1071.4	1075.2	1082.8	1092.2	1094.1
27.5°	1046.9	1048.8	1058.2	1071.4	1073.3
30°	1014.8	1020.5	1031.8	1046.9	1048.8
32.5°	986.6	992.2	1005.4	1020.5	1024.3
35°	950.7	958.3	973.3	992.2	996.0
37.5°	918.6	924.3	943.2	963.9	969.6
40°	879.0	890.3	909.2	933.7	943.2
42.5°	839.4	850.7	873.4	905.4	916.8
45°	797.9	811.1	839.4	875.3	890.3
47.5°	756.4	771.5	803.6	845.1	862.1
50°	709.3	728.1	767.7	814.9	833.8
52.5°	664.0	686.6	730.0	782.8	807.4
55°	616.8	639.5	696.1	750.8	777.2
57.5°	564.0	594.2	656.4	718.7	747.0
60°	515.0	543.3	618.7	686.6	714.9
62.5°	462.2	499.9	581.0	652.7	681.0
65°	407.4	448.9	541.4	613.1	641.4
67.5°	358.4	403.7	501.8	573.4	601.7
70°	299.9	356.5	458.4	530.1	558.4
72.5°	245.2	307.5	413.1	482.9	509.3
75°	192.4	262.2	365.9	428.2	441.4
77.5°	143.4	216.9	316.9	343.3	333.9
80°	101.9	173.5	247.1	233.9	239.6
82.5°	66.0	132.0	152.8	173.5	179.2
85°	37.7	77.3	94.3	101.9	105.6
87.5°	17.0	28.3	37.7	37.7	35.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)