

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: P313011

Luminaire Tested: **22FCZ2-39HE-UNV-L83050-S-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: P313011  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-23)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: 22FCZ2-39HE-UNV-L83050-S-CP250-W2A-U-3500K  
Description: 2'X2' TROFFER LED MODULE, SMOOTH 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**

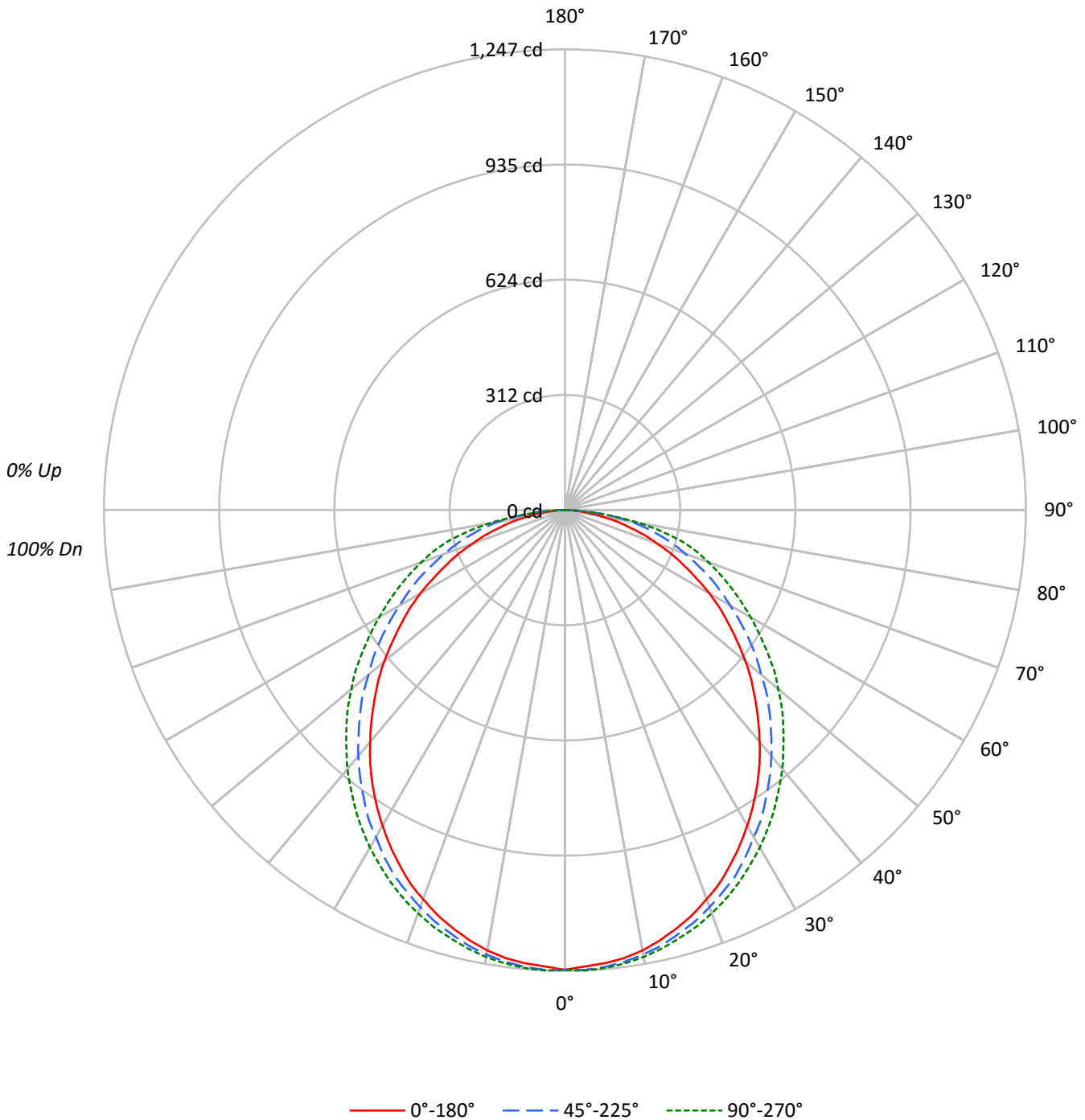
Lumens per Lamp: N/A  
Luminaire Lumens: 3472.0 lumens  
Efficiency: N/A  
Efficacy: 107.2 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 1.26 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 32.4  
Input Voltage (V): NR  
Input Current (A<sub>in</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	94	97	94	91	93	90	88	89	87	85	83
2	98	90	83	77	96	88	82	76	84	79	74	81	77	73	78	74	71	69
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	61	56	52	49
5	75	62	53	47	73	61	53	46	59	52	46	57	51	45	55	50	45	43
6	70	56	47	41	68	55	47	41	53	46	40	52	45	40	50	44	39	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27
10	53	40	32	26	51	39	31	26	38	31	26	37	31	26	36	30	26	24

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

	0°	45°	90°
0°	3348	3348	3348
5°	3326	3352	3361
10°	3307	3337	3355
15°	3263	3308	3340
20°	3210	3275	3326
25°	3146	3242	3304
30°	3066	3176	3277
35°	2980	3119	3246
40°	2879	3056	3215
45°	2774	2984	3181
50°	2672	2902	3154
55°	2546	2850	3131
60°	2433	2781	3121
65°	2269	2764	3156
70°	2090	2740	3250
75°	1886	2779	3420
80°	1632	2862	3214
85°	1349	2402	2402



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	117.7	3.4
10°-20°	334.8	9.6
20°-30°	501.0	14.4
30°-40°	593.3	17.1
40°-50°	604.6	17.4
50°-60°	541.9	15.6
60°-70°	424.3	12.2
70°-80°	273.6	7.9
80°-90°	80.8	2.3
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°	953.5	27.5
0°-40°	1546.8	44.5
0°-60°	2693.3	77.6
0°-90°	3472.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3472.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1244	1244	1244	1244	1244	
5°	1231	1234	1241	1242	1244	117
15°	1171	1178	1187	1197	1199	330
25°	1060	1069	1092	1106	1113	488
35°	907	918	949	978	988	567
45°	729	745	784	825	836	563
55°	543	560	608	650	667	487
65°	356	377	434	476	496	354
75°	181	209	267	313	329	195
85°	44	60	78	78	78	51
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1244.1	1244.1	1244.1	1244.1	1244.1
2.5°	1236.0	1239.3	1245.7	1247.4	1247.4
5°	1231.2	1234.4	1240.9	1242.5	1244.1
7.5°	1223.1	1224.7	1232.8	1236.0	1237.6
10°	1210.1	1213.3	1221.4	1226.3	1227.9
12.5°	1192.3	1197.1	1206.9	1213.3	1215.0
15°	1171.2	1177.7	1187.4	1197.1	1198.8
17.5°	1148.5	1155.0	1168.0	1179.3	1182.6
20°	1121.0	1129.1	1143.7	1156.6	1161.5
22.5°	1093.5	1099.9	1117.8	1134.0	1138.8
25°	1059.5	1069.2	1091.9	1106.4	1112.9
27.5°	1023.8	1035.2	1057.8	1077.3	1083.8
30°	986.6	997.9	1022.2	1046.5	1054.6
32.5°	947.7	960.6	989.8	1014.1	1022.2
35°	907.2	918.5	949.3	978.5	988.2
37.5°	865.1	874.8	910.4	941.2	950.9
40°	819.7	832.7	869.9	905.6	915.3
42.5°	774.3	788.9	826.2	865.1	874.8
45°	729.0	745.2	784.1	824.6	835.9
47.5°	685.2	698.2	741.9	780.8	797.0
50°	638.3	651.2	693.3	737.1	753.3
52.5°	589.7	607.5	652.8	695.0	714.4
55°	542.7	560.5	607.5	649.6	667.4
57.5°	498.9	513.5	562.1	605.9	623.7
60°	452.0	464.9	516.8	563.7	579.9
62.5°	401.7	421.2	474.6	518.4	537.8
65°	356.4	377.4	434.1	476.3	495.7
67.5°	314.3	333.7	388.8	434.1	455.2
70°	265.7	291.6	348.3	393.6	413.1
72.5°	226.8	249.5	307.8	353.2	374.2
75°	181.4	209.0	267.3	312.7	328.9
77.5°	144.2	171.7	226.8	262.4	270.5
80°	105.3	132.8	184.7	202.5	207.4
82.5°	71.3	97.2	132.8	137.7	139.3
85°	43.7	59.9	77.8	77.8	77.8
87.5°	21.1	24.3	27.5	25.9	25.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)