

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: P308815

Luminaire Tested: **22FCZ2-39HE-UNV-L82765-CP187-W2A-U-6500K**

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: P308815  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-33)  
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-L82765-CP187-W2A-U-6500K  
Description: 2'X2' TROFFER LED MODULE, RIBBED LENS, 0.187" POLYCARB SHEET  
Light Source: (168) 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**

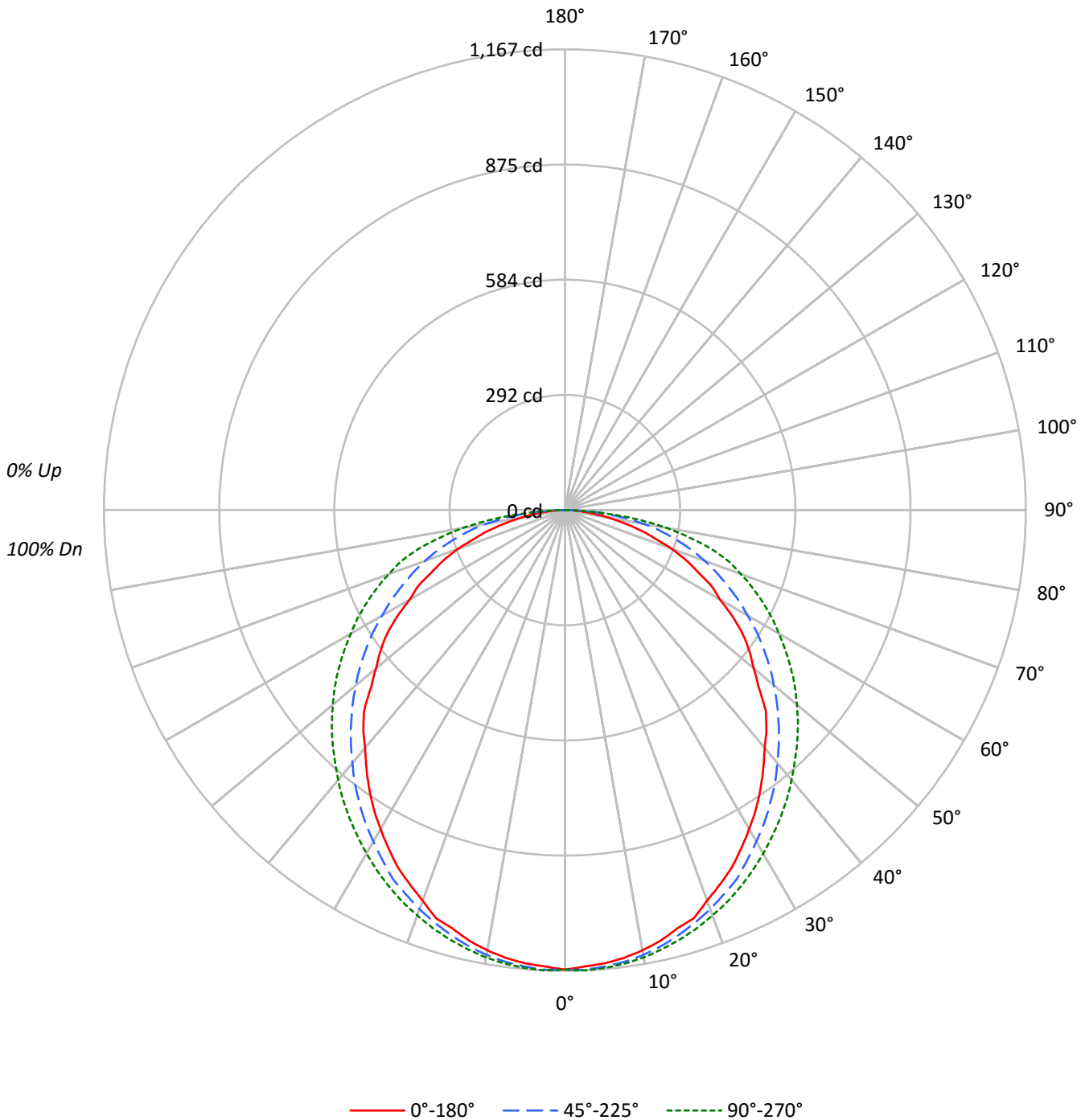
Lumens per Lamp: N/A  
Luminaire Lumens: 3469.0 lumens  
Efficiency: N/A  
Efficacy: 102.6 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 33.8  
Input Voltage (V): NR  
Input Current (A<sub>in</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	90	92	89	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56
4	81	69	60	53	79	67	59	52	65	57	51	62	56	51	60	55	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	39	51	44	38	49	43	38	36
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	45	38	34	32
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	28	40	33	27	39	32	27	38	32	27	25
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

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

	0°	45°	90°
0°	3132	3132	3132
5°	3113	3135	3144
10°	3094	3126	3144
15°	3058	3104	3136
20°	3014	3081	3129
25°	2968	3062	3125
30°	2899	3013	3121
35°	2836	2978	3125
40°	2765	2940	3138
45°	2736	2913	3166
50°	2614	2892	3211
55°	2586	2882	3279
60°	2440	2877	3369
65°	2368	2897	3521
70°	2273	2965	3736
75°	2071	3056	4023
80°	1776	3164	4065
85°	1436	3026	3486



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	110.1	3.2
10°-20°	314.2	9.1
20°-30°	472.9	13.6
30°-40°	567.5	16.4
40°-50°	593.2	17.1
50°-60°	552.8	15.9
60°-70°	453.4	13.1
70°-80°	305.5	8.8
80°-90°	99.5	2.9
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°	897.2	25.9
0°-40°	1464.7	42.2
0°-60°	2610.6	75.3
0°-90°	3469.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3469.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1164	1164	1164	1164	1164	
5°	1152	1156	1161	1162	1164	109
15°	1098	1104	1114	1124	1126	310
25°	1000	1006	1031	1046	1053	459
35°	863	875	906	938	951	540
45°	719	724	765	812	832	549
55°	551	561	614	672	699	488
65°	372	388	455	521	553	370
75°	199	221	294	360	387	209
85°	46	66	98	115	113	55
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1163.9	1163.9	1163.9	<i>1163.9</i>	1163.9
2.5°	<i>1157.2</i>	<i>1160.6</i>	<i>1165.5</i>	<i>1167.2</i>	<i>1167.2</i>
5°	1152.3	1155.6	1160.6	<i>1162.2</i>	1163.9
7.5°	1144.0	1147.3	1153.9	<i>1157.2</i>	1158.9
10°	1132.3	1135.7	1144.0	<i>1148.9</i>	1150.6
12.5°	1117.4	1120.7	1130.7	<i>1137.3</i>	1139.0
15°	1097.5	1104.1	1114.1	<i>1124.0</i>	1125.7
17.5°	1084.2	1082.5	1095.8	<i>1107.4</i>	1110.7
20°	1052.6	1060.9	1075.9	<i>1089.2</i>	1092.5
22.5°	1026.1	1032.7	1052.6	<i>1067.6</i>	1074.2
25°	999.5	1006.1	1031.1	<i>1046.0</i>	1052.6
27.5°	966.3	976.3	999.5	<i>1021.1</i>	1029.4
30°	933.1	943.1	969.6	<i>994.5</i>	1004.5
32.5°	899.9	911.5	939.7	<i>966.3</i>	977.9
35°	863.4	875.0	906.5	<i>938.1</i>	951.4
37.5°	825.2	840.1	873.3	<i>908.2</i>	923.1
40°	787.0	801.9	836.8	<i>876.6</i>	893.2
42.5°	755.4	762.1	801.9	<i>845.1</i>	861.7
45°	718.9	723.9	765.4	<i>811.9</i>	831.8
47.5°	665.8	684.0	728.9	<i>780.3</i>	800.3
50°	624.3	644.2	690.7	<i>745.5</i>	767.1
52.5°	589.4	602.7	654.2	<i>709.0</i>	733.9
55°	551.2	561.2	614.3	<i>672.4</i>	699.0
57.5°	504.7	523.0	576.1	<i>635.9</i>	662.5
60°	453.3	476.5	534.6	<i>599.4</i>	625.9
62.5°	420.1	433.3	496.4	<i>561.2</i>	591.1
65°	371.9	388.5	454.9	<i>521.3</i>	552.9
67.5°	332.1	348.7	416.7	<i>483.2</i>	514.7
70°	288.9	305.5	376.9	<i>443.3</i>	474.8
72.5°	239.1	262.3	337.0	<i>403.5</i>	436.7
75°	199.2	220.8	293.9	<i>360.3</i>	386.9
77.5°	154.4	182.6	250.7	<i>305.5</i>	325.4
80°	114.6	142.8	204.2	<i>244.1</i>	262.3
82.5°	78.0	106.3	152.7	<i>182.6</i>	192.6
85°	46.5	66.4	98.0	<i>114.6</i>	112.9
87.5°	21.6	28.2	39.8	<i>39.8</i>	38.2
90°	0.0	0.0	0.0	<i>0.0</i>	0.0

(END OF REPORT)