

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: P308783

Luminaire Tested: **22FCZ2-39HE-UNV-L82765-CA08-W2A-U-4000K**

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: P308783  
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-CA08-W2A-U-4000K  
Description: 2'X2' TROFFER LED MODULE, RIBBED LENS, 0.08" ACRYLIC 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**

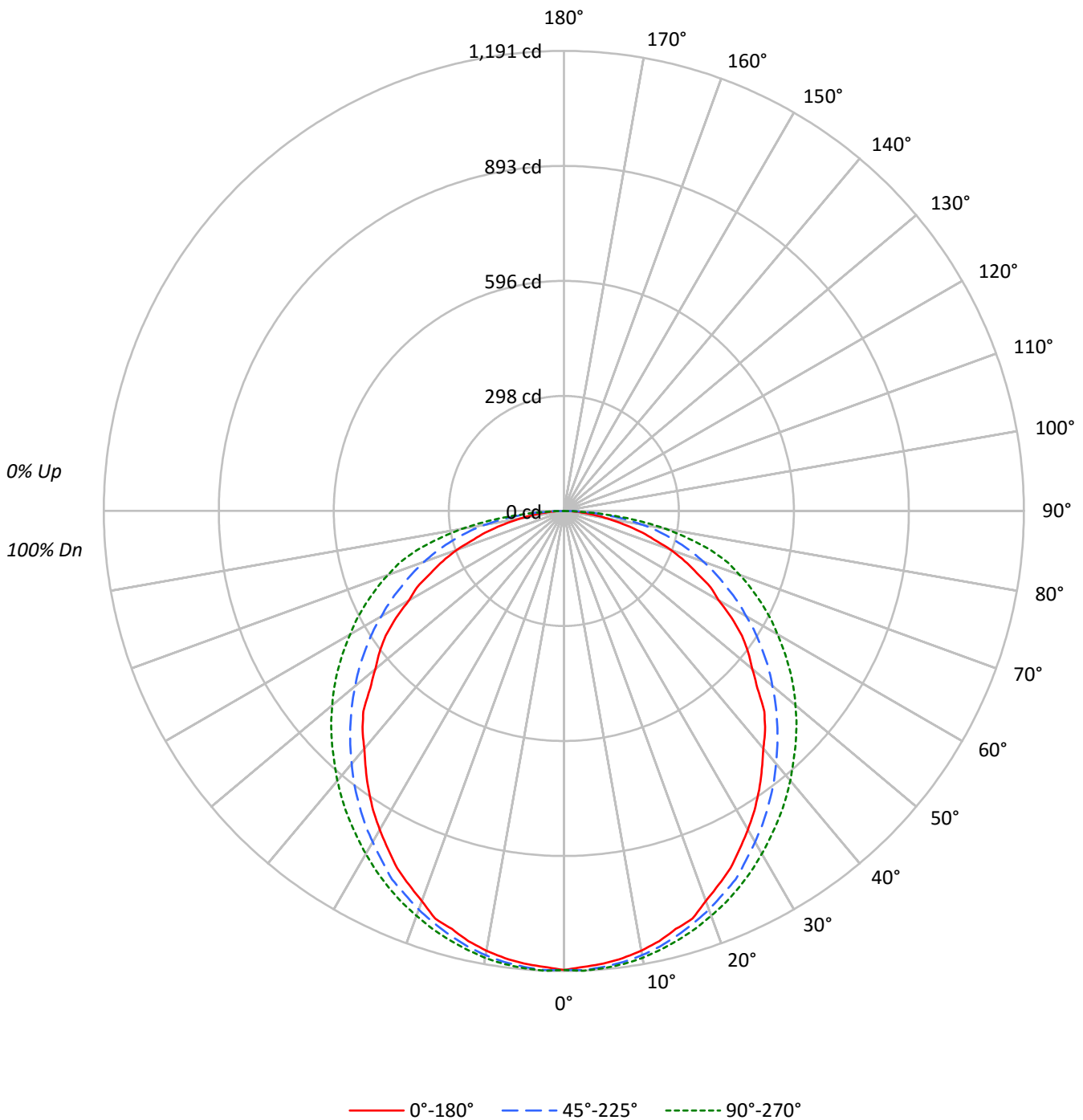
Lumens per Lamp: N/A  
Luminaire Lumens: 3541.0 lumens  
Efficiency: N/A  
Efficacy: 108.0 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 32.8  
Input Voltage (V): NR  
Input Current (Ain): NR  
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°	3197	3197	3197
5°	3177	3200	3209
10°	3158	3191	3209
15°	3121	3168	3201
20°	3077	3145	3194
25°	3029	3125	3190
30°	2960	3075	3186
35°	2895	3040	3190
40°	2822	3001	3203
45°	2793	2973	3231
50°	2668	2951	3278
55°	2640	2942	3347
60°	2490	2937	3439
65°	2417	2957	3594
70°	2320	3027	3814
75°	2115	3119	4106
80°	1812	3231	4150
85°	1467	3088	3557



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	112.4	3.2
10°-20°	320.7	9.1
20°-30°	482.7	13.6
30°-40°	579.3	16.4
40°-50°	605.5	17.1
50°-60°	564.3	15.9
60°-70°	462.8	13.1
70°-80°	311.8	8.8
80°-90°	101.6	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°	915.8	25.9
0°-40°	1495.1	42.2
0°-60°	2664.8	75.3
0°-90°	3541.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3541.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1188	1188	1188	1188	1188	
5°	1176	1180	1185	1186	1188	112
15°	1120	1127	1137	1147	1149	317
25°	1020	1027	1052	1068	1074	469
35°	881	893	925	958	971	551
45°	734	739	781	829	849	561
55°	563	573	627	686	714	499
65°	380	397	464	532	564	378
75°	203	225	300	368	395	214
85°	48	68	100	117	115	56
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1188.0	1188.0	1188.0	<i>1188.0</i>	1188.0
2.5°	<i>1181.3</i>	<i>1184.6</i>	<i>1189.7</i>	<i>1191.4</i>	<i>1191.4</i>
5°	1176.2	1179.6	1184.6	<i>1186.3</i>	1188.0
7.5°	1167.7	1171.1	1177.9	<i>1181.3</i>	1183.0
10°	1155.8	1159.2	1167.7	<i>1172.8</i>	1174.5
12.5°	1140.6	1144.0	1154.1	<i>1160.9</i>	1162.6
15°	1120.2	1127.0	1137.2	<i>1147.4</i>	1149.1
17.5°	1106.7	1105.0	1118.5	<i>1130.4</i>	1133.8
20°	1074.5	1083.0	1098.2	<i>1111.8</i>	1115.2
22.5°	1047.4	1054.1	1074.5	<i>1089.7</i>	1096.5
25°	1020.3	1027.0	1052.5	<i>1067.7</i>	1074.5
27.5°	986.4	996.5	1020.3	<i>1042.3</i>	1050.8
30°	952.5	962.6	989.7	<i>1015.2</i>	1025.3
32.5°	918.6	930.4	959.2	<i>986.4</i>	998.2
35°	881.3	893.1	925.3	<i>957.5</i>	971.1
37.5°	842.3	857.6	891.5	<i>927.0</i>	942.3
40°	803.3	818.6	854.2	<i>894.8</i>	911.8
42.5°	771.1	777.9	818.6	<i>862.6</i>	879.6
45°	733.8	738.9	781.3	<i>828.7</i>	849.1
47.5°	679.6	698.2	744.0	<i>796.5</i>	816.9
50°	637.2	657.6	705.0	<i>761.0</i>	783.0
52.5°	601.6	615.2	667.7	<i>723.7</i>	749.1
55°	562.7	572.8	627.1	<i>686.4</i>	713.5
57.5°	515.2	533.9	588.1	<i>649.1</i>	676.2
60°	462.7	486.4	545.7	<i>611.8</i>	638.9
62.5°	428.8	442.3	506.7	<i>572.8</i>	603.3
65°	379.6	396.6	464.4	<i>532.2</i>	564.4
67.5°	339.0	355.9	425.4	<i>493.2</i>	525.4
70°	294.9	311.8	384.7	<i>452.5</i>	484.7
72.5°	244.0	267.8	344.0	<i>411.8</i>	445.7
75°	203.4	225.4	300.0	<i>367.8</i>	394.9
77.5°	157.6	186.4	255.9	<i>311.8</i>	332.2
80°	116.9	145.8	208.5	<i>249.1</i>	267.8
82.5°	79.7	108.5	155.9	<i>186.4</i>	196.6
85°	47.5	67.8	100.0	<i>116.9</i>	115.2
87.5°	22.0	28.8	40.7	<i>40.7</i>	39.0
90°	0.0	0.0	0.0	<i>0.0</i>	0.0

(END OF REPORT)