

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: P308780

Luminaire Tested: **22FCZ2-39HE-UNV-L82765-CA08-W2A-U-2700K**

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: P308780  
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-2700K  
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**

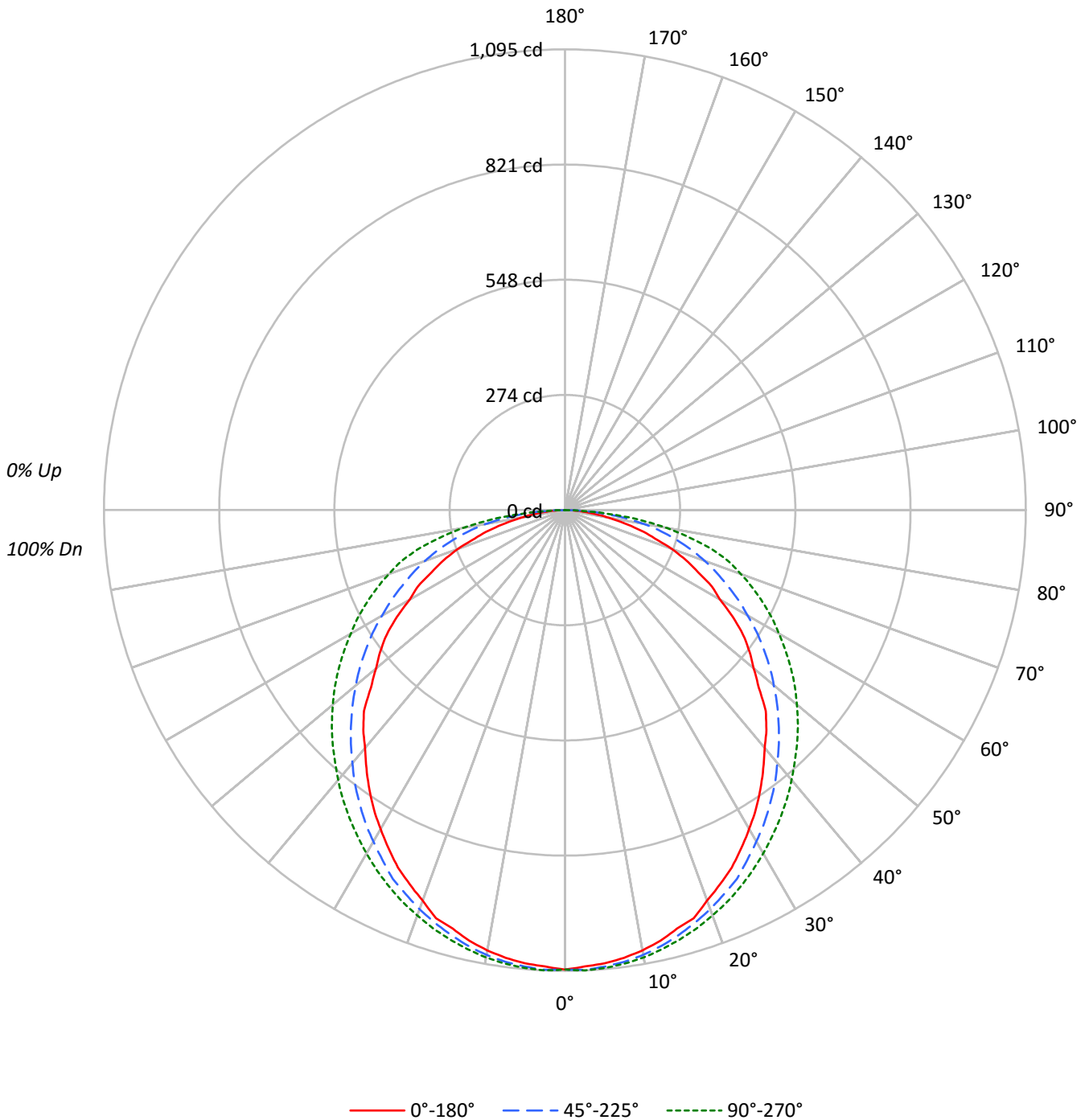
Lumens per Lamp: N/A  
Luminaire Lumens: 3255.0 lumens  
Efficiency: N/A  
Efficacy: 100.5 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 32.4  
Input Voltage (V): NR  
Input Current (A<sub>in</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	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°	2939	2939	2939
5°	2921	2942	2950
10°	2903	2933	2950
15°	2869	2912	2942
20°	2828	2891	2936
25°	2784	2872	2933
30°	2720	2827	2929
35°	2661	2794	2933
40°	2594	2758	2944
45°	2567	2733	2970
50°	2452	2713	3013
55°	2426	2704	3077
60°	2289	2700	3161
65°	2222	2718	3303
70°	2133	2782	3506
75°	1943	2866	3774
80°	1666	2969	3814
85°	1346	2837	3270



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	103.3	3.2
10°-20°	294.8	9.1
20°-30°	443.7	13.6
30°-40°	532.5	16.4
40°-50°	556.6	17.1
50°-60°	518.7	15.9
60°-70°	425.4	13.1
70°-80°	286.7	8.8
80°-90°	93.4	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°	841.8	25.9
0°-40°	1374.3	42.2
0°-60°	2449.6	75.3
0°-90°	3255.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3255.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1092	1092	1092	1092	1092	
5°	1081	1084	1089	1090	1092	103
15°	1030	1036	1045	1055	1056	291
25°	938	944	967	982	988	431
35°	810	821	851	880	893	506
45°	675	679	718	762	780	515
55°	517	527	576	631	656	458
65°	349	364	427	489	519	347
75°	187	207	276	338	363	197
85°	44	62	92	108	106	52
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1092.1	1092.1	1092.1	1092.1	1092.1
2.5°	1085.8	1089.0	1093.6	1095.2	1095.2
5°	1081.2	1084.3	1089.0	1090.5	1092.1
7.5°	1073.4	1076.5	1082.7	1085.8	1087.4
10°	1062.5	1065.6	1073.4	1078.1	1079.6
12.5°	1048.5	1051.6	1060.9	1067.2	1068.7
15°	1029.8	1036.0	1045.3	1054.7	1056.2
17.5°	1017.3	1015.7	1028.2	1039.1	1042.2
20°	987.7	995.5	1009.5	1022.0	1025.1
22.5°	962.8	969.0	987.7	1001.7	1008.0
25°	937.8	944.1	967.4	981.5	987.7
27.5°	906.7	916.0	937.8	958.1	965.9
30°	875.5	884.9	909.8	933.2	942.5
32.5°	844.4	855.3	881.8	906.7	917.6
35°	810.1	821.0	850.6	880.2	892.7
37.5°	774.3	788.3	819.4	852.2	866.2
40°	738.4	752.5	785.2	822.6	838.1
42.5°	708.8	715.1	752.5	793.0	808.5
45°	674.6	679.2	718.2	761.8	780.5
47.5°	624.7	641.9	683.9	732.2	750.9
50°	585.8	604.5	648.1	699.5	719.7
52.5°	553.1	565.5	613.8	665.2	688.6
55°	517.2	526.6	576.4	630.9	655.9
57.5°	473.6	490.7	540.6	596.7	621.6
60°	425.3	447.1	501.6	562.4	587.3
62.5°	394.1	406.6	465.8	526.6	554.6
65°	349.0	364.5	426.9	489.2	518.8
67.5°	311.6	327.2	391.0	453.3	482.9
70°	271.1	286.7	353.6	416.0	445.6
72.5°	224.3	246.1	316.3	378.6	409.7
75°	186.9	207.2	275.7	338.1	363.0
77.5°	144.9	171.4	235.2	286.7	305.3
80°	107.5	134.0	191.6	229.0	246.1
82.5°	73.2	99.7	143.3	171.4	180.7
85°	43.6	62.3	91.9	107.5	105.9
87.5°	20.3	26.5	37.4	37.4	35.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)