

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: P308784

Luminaire Tested: **22FCZ2-39HE-UNV-L82765-CA08-W2A-U-4500K**

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: P308784  
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-4500K  
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**

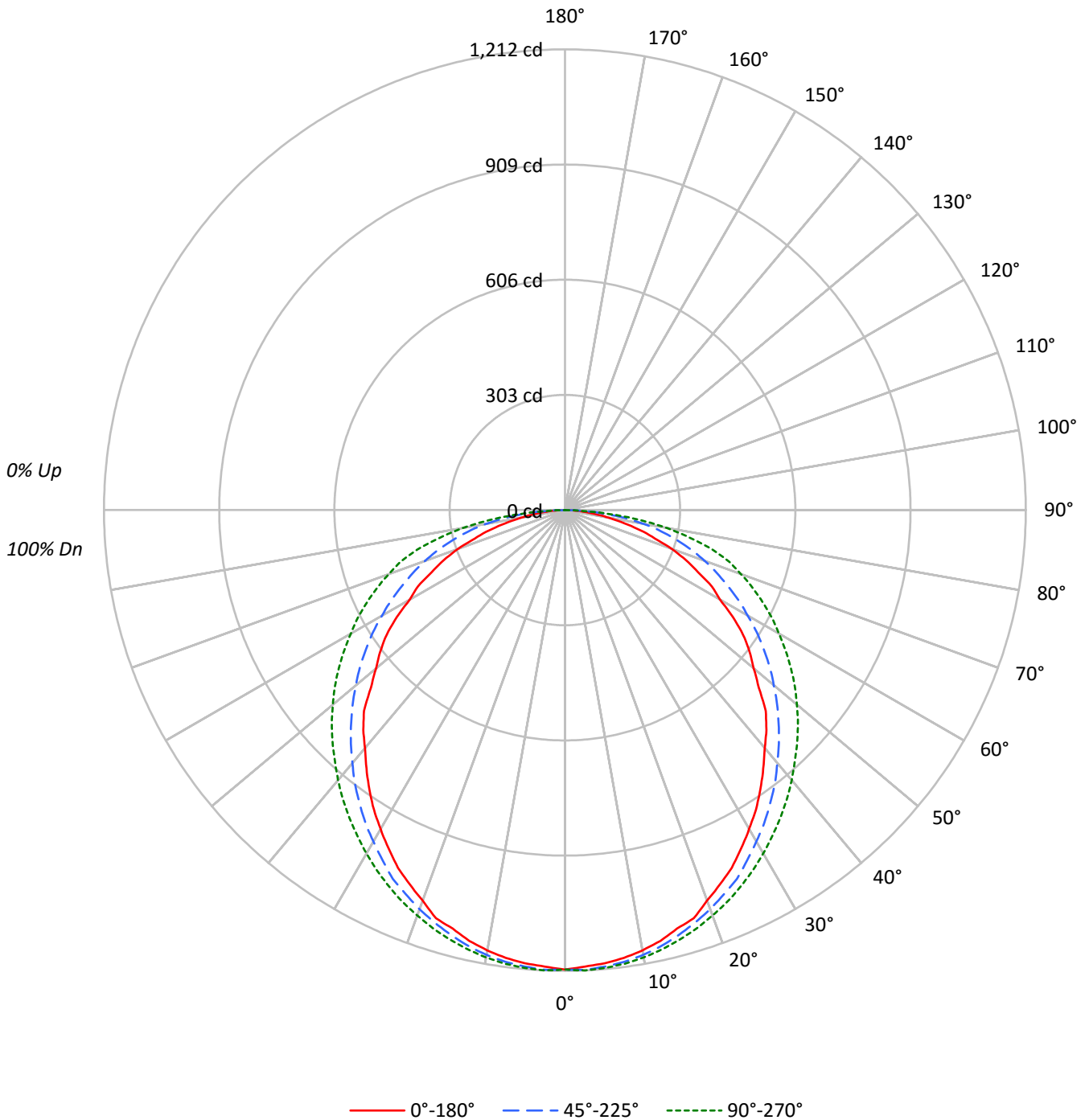
Lumens per Lamp: N/A  
Luminaire Lumens: 3603.0 lumens  
Efficiency: N/A  
Efficacy: 109.2 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 33  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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°	3253	3253	3253
5°	3233	3256	3265
10°	3214	3246	3265
15°	3176	3224	3257
20°	3131	3200	3249
25°	3082	3180	3246
30°	3011	3129	3242
35°	2946	3093	3246
40°	2871	3053	3259
45°	2842	3025	3288
50°	2714	3003	3335
55°	2686	2993	3406
60°	2534	2989	3499
65°	2460	3009	3656
70°	2361	3079	3880
75°	2151	3173	4178
80°	1844	3287	4223
85°	1491	3140	3622



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	114.4	3.2
10°-20°	326.3	9.1
20°-30°	491.1	13.6
30°-40°	589.4	16.4
40°-50°	616.1	17.1
50°-60°	574.1	15.9
60°-70°	470.9	13.1
70°-80°	317.3	8.8
80°-90°	103.3	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°	931.8	25.9
0°-40°	1521.2	42.2
0°-60°	2711.5	75.3
0°-90°	3603.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3603.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1209	1209	1209	1209	1209	
5°	1197	1200	1205	1207	1209	114
15°	1140	1147	1157	1168	1169	322
25°	1038	1045	1071	1086	1093	477
35°	897	909	942	974	988	561
45°	747	752	795	843	864	570
55°	572	583	638	698	726	507
65°	386	404	472	542	574	384
75°	207	229	305	374	402	218
85°	48	69	102	119	117	57
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1208.8	1208.8	1208.8	1208.8	1208.8
2.5°	1201.9	1205.4	1210.6	1212.3	1212.3
5°	1196.8	1200.2	1205.4	1207.1	1208.8
7.5°	1188.1	1191.6	1198.5	1201.9	1203.7
10°	1176.1	1179.5	1188.1	1193.3	1195.0
12.5°	1160.6	1164.0	1174.3	1181.2	1183.0
15°	1139.9	1146.8	1157.1	1167.5	1169.2
17.5°	1126.1	1124.3	1138.1	1150.2	1153.7
20°	1093.3	1101.9	1117.4	1131.2	1134.7
22.5°	1065.7	1072.6	1093.3	1108.8	1115.7
25°	1038.1	1045.0	1070.9	1086.4	1093.3
27.5°	1003.6	1014.0	1038.1	1060.5	1069.2
30°	969.1	979.5	1007.1	1032.9	1043.3
32.5°	934.7	946.7	976.0	1003.6	1015.7
35°	896.7	908.8	941.5	974.3	988.1
37.5°	857.0	872.6	907.1	943.3	958.8
40°	817.4	832.9	869.1	910.5	927.8
42.5°	784.6	791.5	832.9	877.7	895.0
45°	746.7	751.9	795.0	843.3	863.9
47.5°	691.5	710.5	757.0	810.5	831.2
50°	648.4	669.1	717.4	774.3	796.7
52.5°	612.2	626.0	679.4	736.3	762.2
55°	572.5	582.9	638.0	698.4	726.0
57.5°	524.2	543.2	598.4	660.5	688.1
60°	470.8	494.9	555.3	622.5	650.1
62.5°	436.3	450.1	515.6	582.9	613.9
65°	386.3	403.5	472.5	541.5	574.2
67.5°	344.9	362.1	432.8	501.8	534.6
70°	300.1	317.3	391.4	460.4	493.2
72.5°	248.3	272.5	350.1	419.0	453.5
75°	206.9	229.4	305.2	374.2	401.8
77.5°	160.4	189.7	260.4	317.3	338.0
80°	119.0	148.3	212.1	253.5	272.5
82.5°	81.0	110.4	158.6	189.7	200.0
85°	48.3	69.0	101.7	119.0	117.3
87.5°	22.4	29.3	41.4	41.4	39.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)