

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: P308809

Luminaire Tested: **22FCZ2-39HE-UNV-L82765-CP187-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: P308809  
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-3500K  
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**

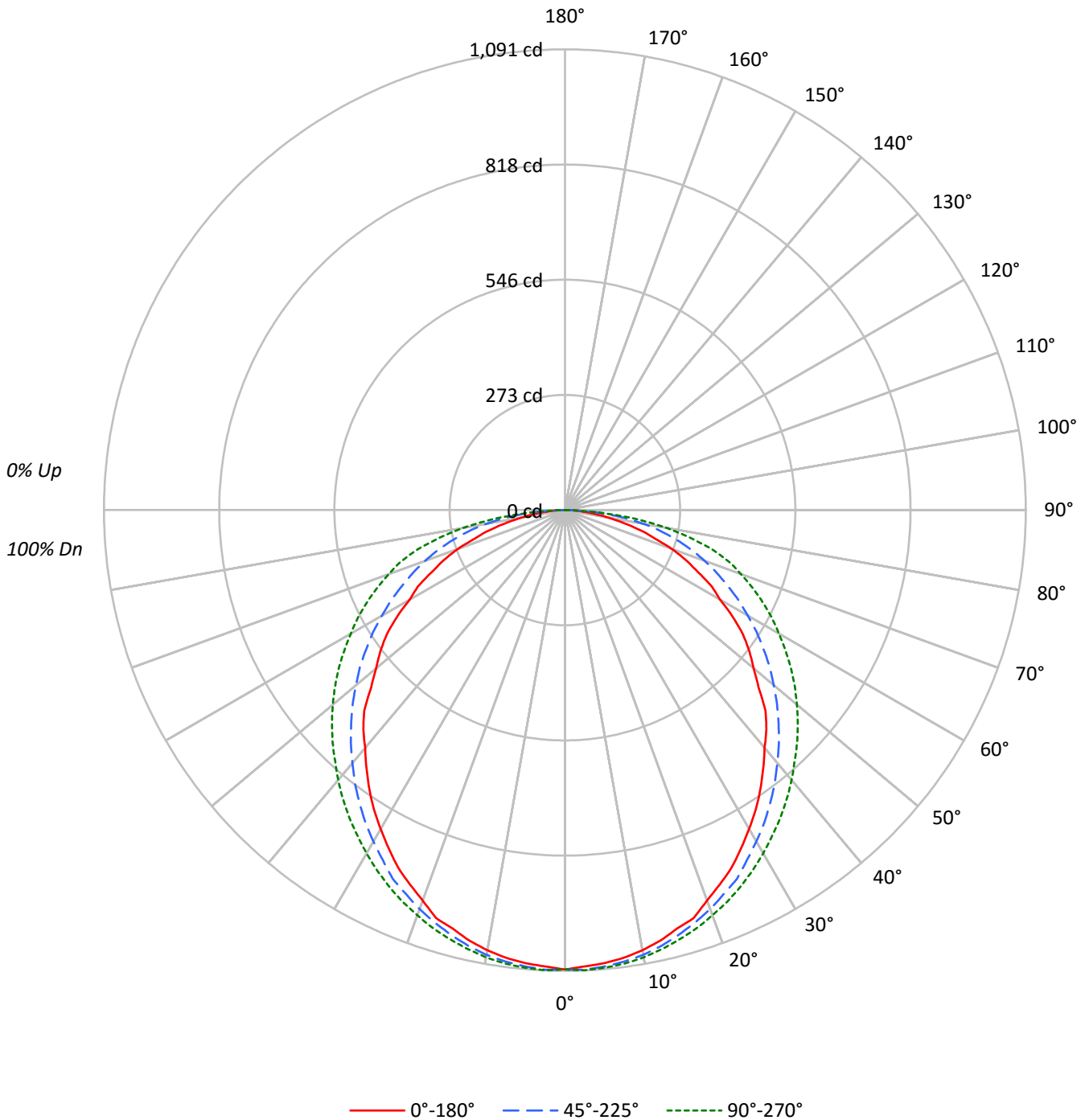
Lumens per Lamp: N/A  
Luminaire Lumens: 3242.0 lumens  
Efficiency: N/A  
Efficacy: 99.4 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 32.6  
Input Voltage (V): NR  
Input Current (Ain): NR  
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°	2927	2927	2927
5°	2909	2930	2938
10°	2892	2921	2938
15°	2858	2901	2931
20°	2817	2879	2924
25°	2773	2861	2921
30°	2710	2816	2917
35°	2651	2783	2921
40°	2584	2747	2933
45°	2557	2722	2958
50°	2442	2702	3001
55°	2417	2693	3065
60°	2280	2689	3148
65°	2213	2707	3290
70°	2124	2771	3492
75°	1936	2855	3759
80°	1660	2958	3800
85°	1340	2825	3257



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	102.9	3.2
10°-20°	293.6	9.1
20°-30°	441.9	13.6
30°-40°	530.4	16.4
40°-50°	554.3	17.1
50°-60°	516.6	15.9
60°-70°	423.7	13.1
70°-80°	285.5	8.8
80°-90°	93.0	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°	838.5	25.9
0°-40°	1368.8	42.2
0°-60°	2439.8	75.3
0°-90°	3242.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3242.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1088	1088	1088	1088	1088	
5°	1077	1080	1085	1086	1088	102
15°	1026	1032	1041	1050	1052	290
25°	934	940	964	978	984	429
35°	807	818	847	877	889	504
45°	672	676	715	759	777	513
55°	515	524	574	628	653	456
65°	348	363	425	487	517	346
75°	186	206	275	337	362	196
85°	43	62	92	107	106	52
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1087.7	1087.7	1087.7	1087.7	1087.7
2.5°	1081.5	1084.6	1089.3	1090.8	1090.8
5°	1076.9	1080.0	1084.6	1086.2	1087.7
7.5°	1069.1	1072.2	1078.4	1081.5	1083.1
10°	1058.2	1061.3	1069.1	1073.8	1075.3
12.5°	1044.3	1047.4	1056.7	1062.9	1064.4
15°	1025.7	1031.9	1041.2	1050.5	1052.0
17.5°	1013.2	1011.7	1024.1	1035.0	1038.1
20°	983.8	991.5	1005.5	1017.9	1021.0
22.5°	958.9	965.1	983.8	997.7	1003.9
25°	934.1	940.3	963.6	977.6	983.8
27.5°	903.1	912.4	934.1	954.3	962.0
30°	872.0	881.3	906.2	929.4	938.8
32.5°	841.0	851.9	878.2	903.1	913.9
35°	806.9	817.7	847.2	876.7	889.1
37.5°	771.2	785.1	816.2	848.8	862.7
40°	735.5	749.5	782.0	819.3	834.8
42.5°	706.0	712.2	749.5	789.8	805.3
45°	671.9	676.5	715.3	758.8	777.4
47.5°	622.2	639.3	681.2	729.3	747.9
50°	583.4	602.0	645.5	696.7	716.9
52.5°	550.8	563.3	611.4	662.6	685.8
55°	515.2	524.5	574.1	628.4	653.3
57.5°	471.7	488.8	538.4	594.3	619.1
60°	423.6	445.3	499.6	560.2	585.0
62.5°	392.6	405.0	463.9	524.5	552.4
65°	347.6	363.1	425.2	487.2	516.7
67.5°	310.3	325.9	389.5	451.5	481.0
70°	270.0	285.5	352.2	414.3	443.8
72.5°	223.4	245.2	315.0	377.1	408.1
75°	186.2	206.4	274.6	336.7	361.5
77.5°	144.3	170.7	234.3	285.5	304.1
80°	107.1	133.4	190.9	228.1	245.2
82.5°	72.9	99.3	142.8	170.7	180.0
85°	43.4	62.1	91.5	107.1	105.5
87.5°	20.2	26.4	37.2	37.2	35.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)