

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: P308811

Luminaire Tested: **22FCZ2-39HE-UNV-L82765-CP187-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: P308811  
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-4500K  
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**

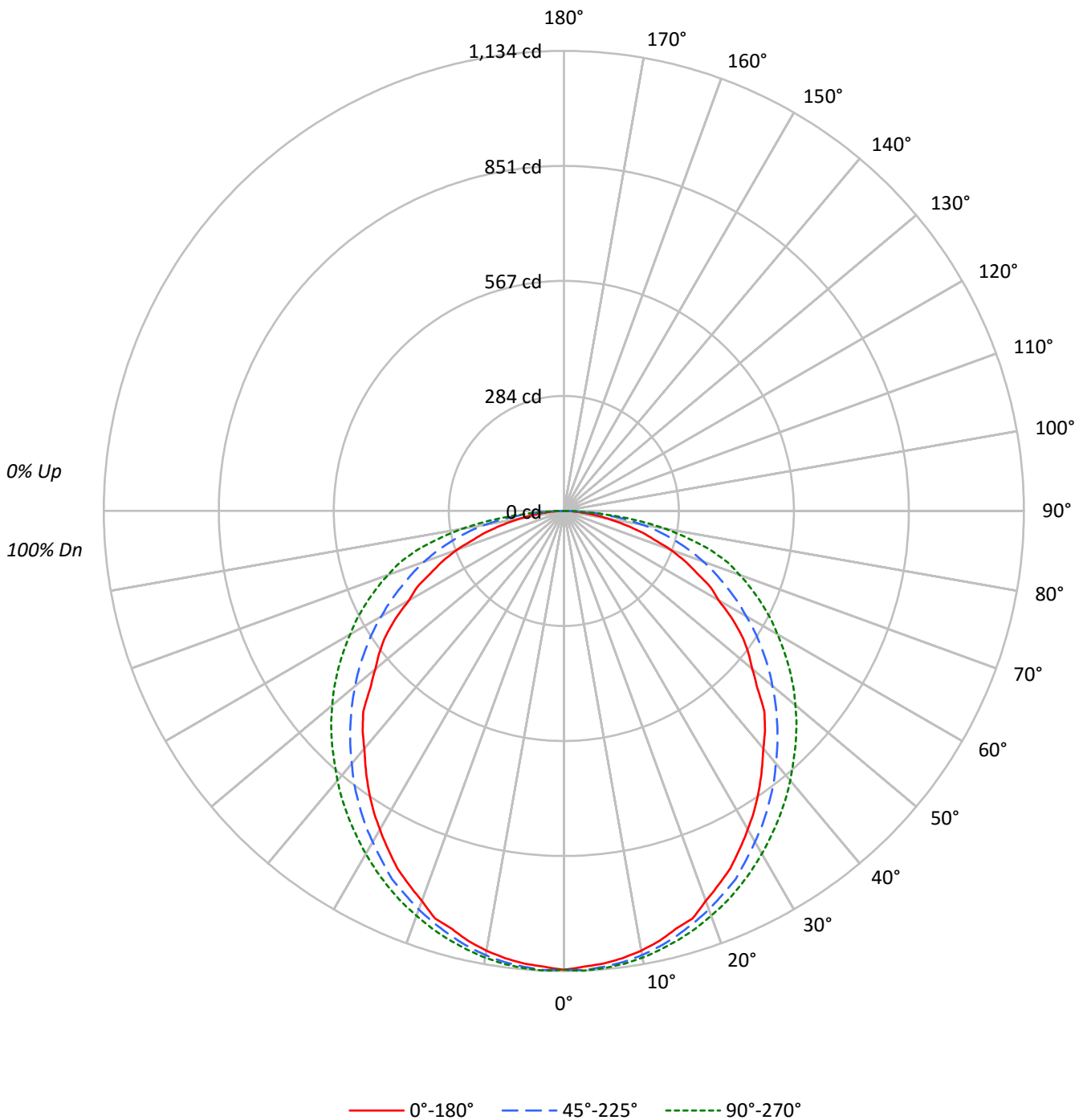
Lumens per Lamp: N/A  
Luminaire Lumens: 3371.0 lumens  
Efficiency: N/A  
Efficacy: 102.2 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 33  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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°	3043	3043	3043
5°	3025	3046	3055
10°	3007	3037	3055
15°	2971	3016	3048
20°	2929	2994	3040
25°	2884	2975	3037
30°	2817	2928	3033
35°	2756	2894	3037
40°	2687	2857	3049
45°	2659	2831	3076
50°	2539	2810	3121
55°	2513	2801	3187
60°	2371	2796	3274
65°	2301	2815	3421
70°	2209	2881	3630
75°	2013	2969	3908
80°	1725	3075	3950
85°	1396	2939	3387



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	107.0	3.2
10°-20°	305.3	9.1
20°-30°	459.5	13.6
30°-40°	551.5	16.4
40°-50°	576.4	17.1
50°-60°	537.2	15.9
60°-70°	440.6	13.1
70°-80°	296.9	8.8
80°-90°	96.7	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°	871.8	25.9
0°-40°	1423.3	42.2
0°-60°	2536.9	75.3
0°-90°	3371.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3371.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1131	1131	1131	1131	1131	
5°	1120	1123	1128	1129	1131	106
15°	1066	1073	1083	1092	1094	301
25°	971	978	1002	1016	1023	447
35°	839	850	881	912	924	525
45°	699	703	744	789	808	534
55°	536	545	597	653	679	475
65°	361	378	442	507	537	360
75°	194	215	286	350	376	204
85°	45	64	95	111	110	54
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1131.0	1131.0	1131.0	1131.0	1131.0
2.5°	1124.5	1127.8	1132.6	1134.2	1134.2
5°	1119.7	1122.9	1127.8	1129.4	1131.0
7.5°	1111.6	1114.9	1121.3	1124.5	1126.2
10°	1100.3	1103.6	1111.6	1116.5	1118.1
12.5°	1085.8	1089.1	1098.7	1105.2	1106.8
15°	1066.5	1072.9	1082.6	1092.3	1093.9
17.5°	1053.6	1051.9	1064.8	1076.1	1079.4
20°	1022.9	1031.0	1045.5	1058.4	1061.6
22.5°	997.1	1003.5	1022.9	1037.4	1043.9
25°	971.3	977.7	1001.9	1016.4	1022.9
27.5°	939.0	948.7	971.3	992.2	1000.3
30°	906.7	916.4	942.2	966.4	976.1
32.5°	874.5	885.8	913.2	939.0	950.3
35°	839.0	850.3	880.9	911.6	924.5
37.5°	801.9	816.4	848.7	882.5	897.1
40°	764.8	779.3	813.2	851.9	868.0
42.5°	734.1	740.6	779.3	821.2	837.4
45°	698.6	703.4	743.8	789.0	808.3
47.5°	647.0	664.7	708.3	758.3	777.7
50°	606.6	626.0	671.2	724.4	745.4
52.5°	572.8	585.7	635.7	688.9	713.1
55°	535.7	545.3	597.0	653.4	679.2
57.5°	490.5	508.2	559.9	617.9	643.7
60°	440.5	463.0	519.5	582.4	608.3
62.5°	408.2	421.1	482.4	545.3	574.4
65°	361.4	377.5	442.1	506.6	537.3
67.5°	322.7	338.8	405.0	469.5	500.2
70°	280.7	296.9	366.2	430.8	461.4
72.5°	232.3	254.9	327.5	392.1	424.3
75°	193.6	214.6	285.6	350.1	375.9
77.5°	150.0	177.5	243.6	296.9	316.2
80°	111.3	138.8	198.4	237.2	254.9
82.5°	75.8	103.3	148.4	177.5	187.2
85°	45.2	64.5	95.2	111.3	109.7
87.5°	21.0	27.4	38.7	38.7	37.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)