

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: P313005

Luminaire Tested: **22FCZ2-39HE-UNV-L83050-S-CP187-W2A-U-3000K**

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: P313005  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-23)  
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-L83050-S-CP187-W2A-U-3000K  
Description: 2'X2' TROFFER LED MODULE, SMOOTH 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**

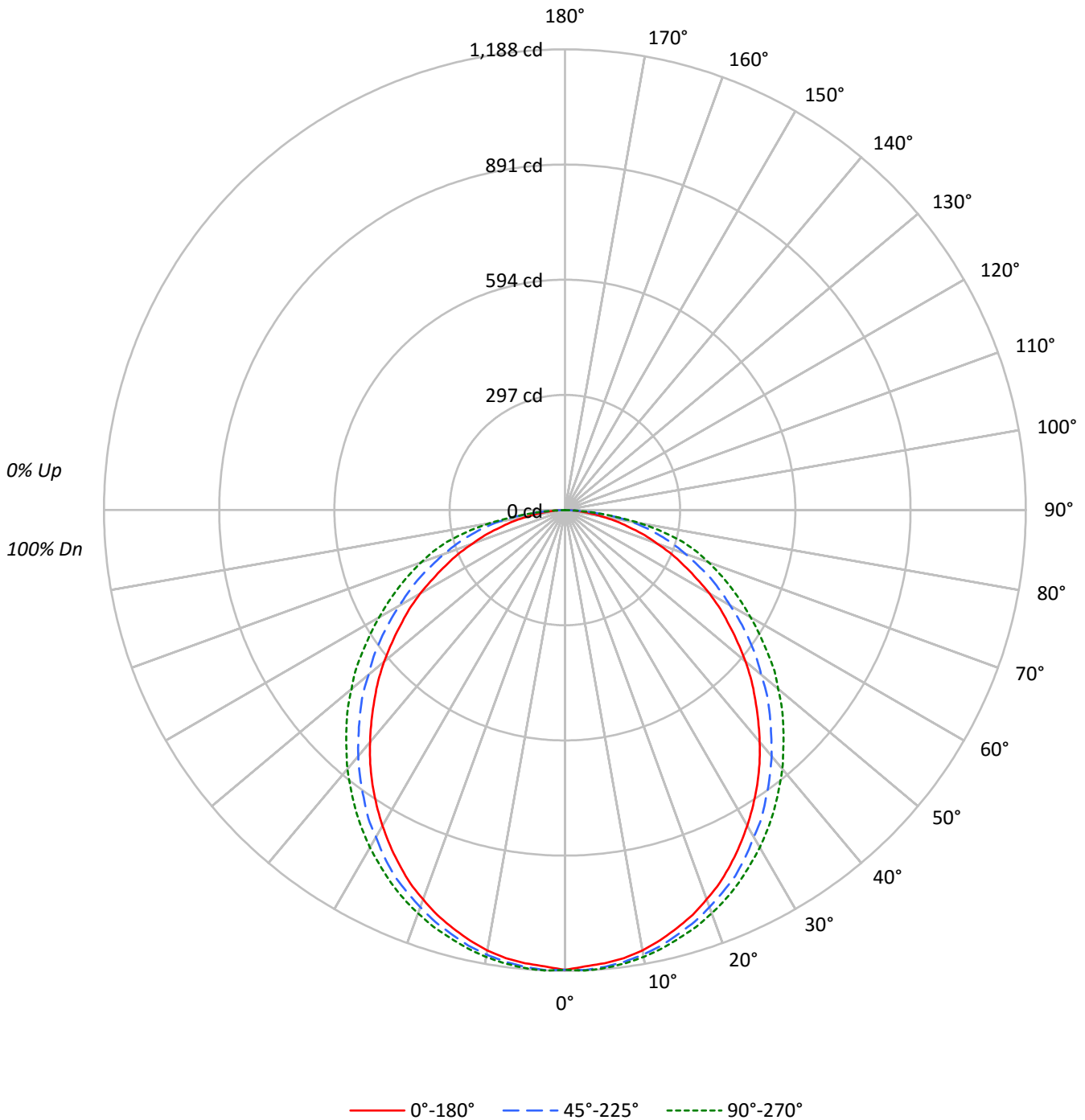
Lumens per Lamp: N/A  
Luminaire Lumens: 3308.0 lumens  
Efficiency: N/A  
Efficacy: 102.4 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 1.26 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 32.3  
Input Voltage (V): NR  
Input Current (A<sub>in</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



TEST NUMBER: P313005

CATALOG NUMBER: 22FCZ2-39HE-UNV-L83050-S-CP187-W2A-U-3000K

### Luminous Intensity Polar Plot





TEST NUMBER: P313005

CATALOG NUMBER: 22FCZ2-39HE-UNV-L83050-S-CP187-W2A-U-3000K

**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	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83
2	98	90	83	77	96	88	82	76	84	79	74	81	77	73	78	74	71	69
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	61	56	52	49
5	75	62	53	47	73	61	53	46	59	52	46	57	51	45	55	50	45	43
6	70	56	47	41	68	55	47	41	53	46	40	52	45	40	50	44	39	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27
10	53	40	32	26	51	39	31	26	38	31	26	37	31	26	36	30	26	24

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	3190	3190	3190
5°	3169	3194	3202
10°	3150	3180	3197
15°	3109	3152	3182
20°	3059	3121	3169
25°	2997	3089	3148
30°	2921	3026	3122
35°	2839	2971	3093
40°	2744	2911	3063
45°	2643	2843	3031
50°	2546	2766	3005
55°	2426	2715	2983
60°	2317	2650	2974
65°	2162	2634	3007
70°	1991	2611	3097
75°	1798	2648	3257
80°	1554	2727	3062
85°	1288	2288	2288



TEST NUMBER: P313005

CATALOG NUMBER: 22FCZ2-39HE-UNV-L83050-S-CP187-W2A-U-3000K

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	112.1	3.4
10°-20°	319.0	9.6
20°-30°	477.3	14.4
30°-40°	565.3	17.1
40°-50°	576.1	17.4
50°-60°	516.3	15.6
60°-70°	404.2	12.2
70°-80°	260.7	7.9
80°-90°	77.0	2.3
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°	908.4	27.5
0°-40°	1473.7	44.5
0°-60°	2566.1	77.6
0°-90°	3308.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3308.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1185	1185	1185	1185	1185	
5°	1173	1176	1182	1184	1185	111
15°	1116	1122	1131	1141	1142	315
25°	1009	1019	1040	1054	1060	465
35°	864	875	904	932	942	540
45°	694	710	747	786	796	536
55°	517	534	579	619	636	464
65°	340	360	414	454	472	337
75°	173	199	255	298	313	185
85°	42	57	74	74	74	49
90°	0	0	0	0	0	



TEST NUMBER: P313005

CATALOG NUMBER: 22FCZ2-39HE-UNV-L83050-S-CP187-W2A-U-3000K

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1185.4	1185.4	1185.4	1185.4	1185.4
2.5°	1177.6	1180.7	1186.9	1188.4	1188.4
5°	1173.0	1176.1	1182.3	1183.8	1185.4
7.5°	1165.3	1166.8	1174.6	1177.6	1179.2
10°	1152.9	1156.0	1163.8	1168.4	1169.9
12.5°	1136.0	1140.6	1149.9	1156.0	1157.6
15°	1115.9	1122.1	1131.3	1140.6	1142.1
17.5°	1094.3	1100.5	1112.8	1123.6	1126.7
20°	1068.1	1075.8	1089.7	1102.0	1106.6
22.5°	1041.8	1048.0	1065.0	1080.4	1085.0
25°	1009.4	1018.7	1040.3	1054.2	1060.3
27.5°	975.5	986.3	1007.9	1026.4	1032.6
30°	940.0	950.8	973.9	997.1	1004.8
32.5°	902.9	915.3	943.0	966.2	973.9
35°	864.3	875.1	904.5	932.2	941.5
37.5°	824.2	833.5	867.4	896.7	906.0
40°	781.0	793.3	828.8	862.8	872.0
42.5°	737.8	751.7	787.2	824.2	833.5
45°	694.5	710.0	747.0	785.6	796.4
47.5°	652.9	665.2	706.9	743.9	759.4
50°	608.1	620.5	660.6	702.3	717.7
52.5°	561.8	578.8	622.0	662.1	680.7
55°	517.1	534.0	578.8	618.9	635.9
57.5°	475.4	489.3	535.6	577.2	594.2
60°	430.6	443.0	492.4	537.1	552.6
62.5°	382.8	401.3	452.2	493.9	512.4
65°	339.6	359.6	413.6	453.8	472.3
67.5°	299.4	317.9	370.4	413.6	433.7
70°	253.1	277.8	331.8	375.1	393.6
72.5°	216.1	237.7	293.3	336.5	356.5
75°	172.9	199.1	254.7	297.9	313.3
77.5°	137.4	163.6	216.1	250.0	257.8
80°	100.3	126.6	176.0	192.9	197.6
82.5°	67.9	92.6	126.6	131.2	132.7
85°	41.7	57.1	74.1	74.1	74.1
87.5°	20.1	23.2	26.2	24.7	24.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)