

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: P313006

Luminaire Tested: **22FCZ2-39HE-UNV-L83050-S-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: P313006  
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-3500K  
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.187" POLYCARB SHEET  
Light Source: (168) 3500K 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**

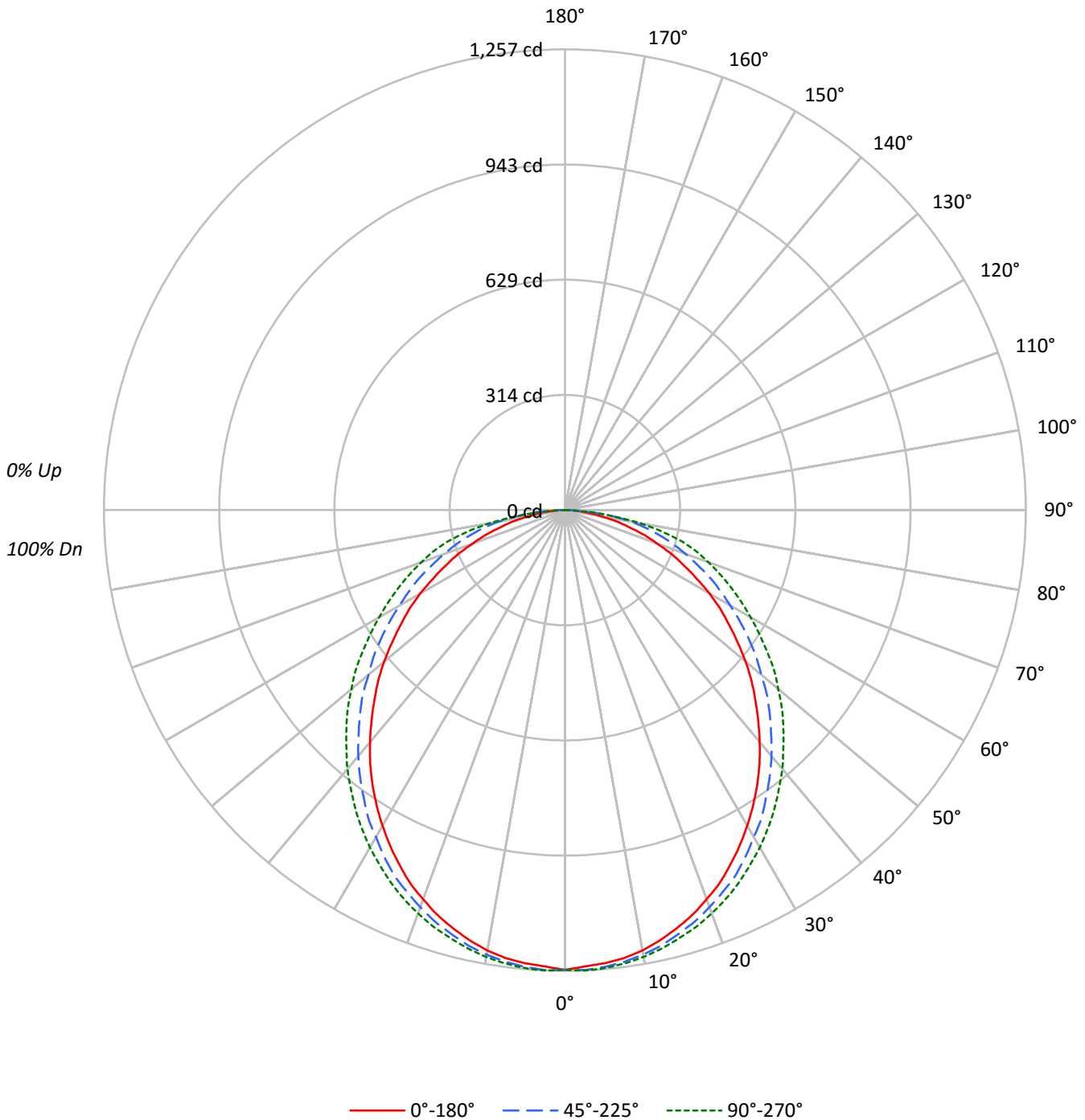
Lumens per Lamp: N/A  
Luminaire Lumens: 3500.0 lumens  
Efficiency: N/A  
Efficacy: 108.0 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 1.26 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 32.4  
Input Voltage (V): NR  
Input Current (A<sub>in</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



TEST NUMBER: P313006

CATALOG NUMBER: 22FCZ2-39HE-UNV-L83050-S-CP187-W2A-U-3500K

### Luminous Intensity Polar Plot





TEST NUMBER: P313006

CATALOG NUMBER: 22FCZ2-39HE-UNV-L83050-S-CP187-W2A-U-3500K

**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°	3375	3375	3375
5°	3353	3379	3388
10°	3333	3365	3382
15°	3289	3335	3366
20°	3236	3302	3353
25°	3171	3268	3331
30°	3090	3202	3303
35°	3004	3143	3272
40°	2903	3080	3241
45°	2797	3008	3207
50°	2694	2926	3179
55°	2567	2873	3156
60°	2452	2803	3146
65°	2288	2786	3182
70°	2107	2762	3276
75°	1902	2801	3447
80°	1644	2885	3239
85°	1362	2421	2421



TEST NUMBER: P313006

CATALOG NUMBER: 22FCZ2-39HE-UNV-L83050-S-CP187-W2A-U-3500K

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	118.6	3.4
10°-20°	337.5	9.6
20°-30°	505.0	14.4
30°-40°	598.1	17.1
40°-50°	609.5	17.4
50°-60°	546.3	15.6
60°-70°	427.7	12.2
70°-80°	275.8	7.9
80°-90°	81.5	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°	961.2	27.5
0°-40°	1559.2	44.5
0°-60°	2715.0	77.6
0°-90°	3500.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3500.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1254	1254	1254	1254	1254	
5°	1241	1244	1251	1252	1254	118
15°	1181	1187	1197	1207	1208	333
25°	1068	1078	1101	1115	1122	492
35°	914	926	957	986	996	572
45°	735	751	790	831	843	568
55°	547	565	612	655	673	490
65°	359	380	438	480	500	357
75°	183	211	269	315	332	196
85°	44	60	78	78	78	52
90°	0	0	0	0	0	



TEST NUMBER: P313006

CATALOG NUMBER: 22FCZ2-39HE-UNV-L83050-S-CP187-W2A-U-3500K

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1254.2	1254.2	1254.2	1254.2	1254.2
2.5°	1246.0	1249.3	1255.8	1257.4	1257.4
5°	1241.1	1244.4	1250.9	1252.5	1254.2
7.5°	1232.9	1234.6	1242.7	1246.0	1247.6
10°	1219.9	1223.1	1231.3	1236.2	1237.8
12.5°	1201.9	1206.8	1216.6	1223.1	1224.8
15°	1180.7	1187.2	1197.0	1206.8	1208.4
17.5°	1157.8	1164.3	1177.4	1188.8	1192.1
20°	1130.0	1138.2	1152.9	1166.0	1170.9
22.5°	1102.3	1108.8	1126.8	1143.1	1148.0
25°	1068.0	1077.8	1100.7	1115.4	1121.9
27.5°	1032.1	1043.5	1066.4	1086.0	1092.5
30°	994.5	1005.9	1030.4	1054.9	1063.1
32.5°	955.3	968.4	997.8	1022.3	1030.4
35°	914.5	925.9	956.9	986.3	996.1
37.5°	872.0	881.8	917.8	948.8	958.6
40°	826.3	839.4	876.9	912.9	922.7
42.5°	780.6	795.3	832.8	872.0	881.8
45°	734.9	751.2	790.4	831.2	842.6
47.5°	690.8	703.8	747.9	787.1	803.4
50°	643.4	656.5	698.9	743.0	759.4
52.5°	594.4	612.4	658.1	700.6	720.2
55°	547.1	565.0	612.4	654.8	672.8
57.5°	503.0	517.7	566.7	610.7	628.7
60°	455.6	468.7	520.9	568.3	584.6
62.5°	405.0	424.6	478.5	522.6	542.2
65°	359.3	380.5	437.6	480.1	499.7
67.5°	316.8	336.4	391.9	437.6	458.9
70°	267.8	293.9	351.1	396.8	416.4
72.5°	228.6	251.5	310.3	356.0	377.2
75°	182.9	210.7	269.4	315.2	331.5
77.5°	145.3	173.1	228.6	264.5	272.7
80°	106.1	133.9	186.2	204.1	209.0
82.5°	71.9	98.0	133.9	138.8	140.4
85°	44.1	60.4	78.4	78.4	78.4
87.5°	21.2	24.5	27.8	26.1	26.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)