

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: P312880

Luminaire Tested: **22FCZ2-44HE-UNV-L83050-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: P312880
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: 22FCZ2-44HE-UNV-L83050-CP187-W2A-U-3000K
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: 3519.0 lumens
Efficiency: N/A
Efficacy: 94.9 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

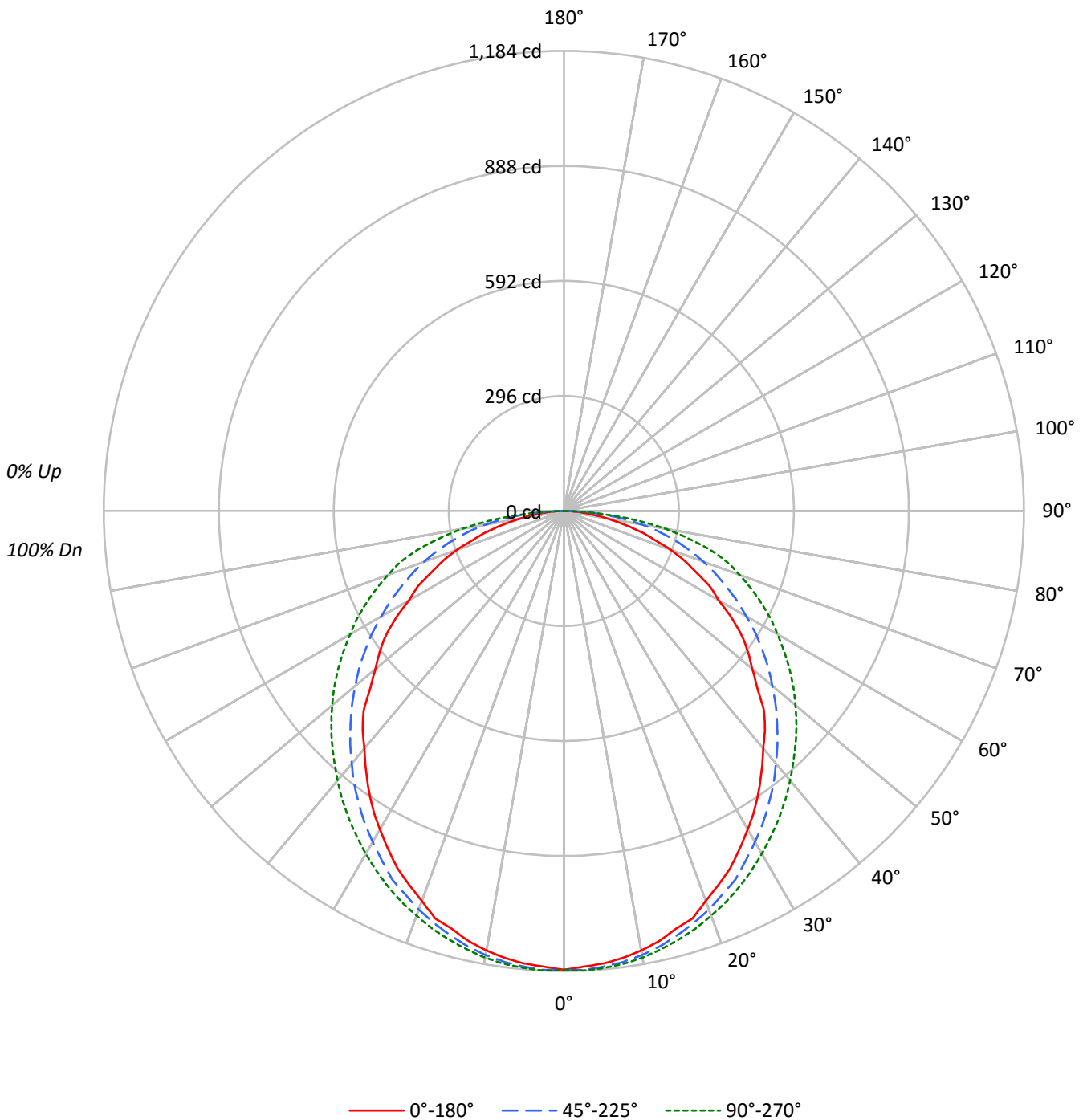
Input Watts (W): 37.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P312880

CATALOG NUMBER: 22FCZ2-44HE-UNV-L83050-CP187-W2A-U-3000K

Luminous Intensity Polar Plot





TEST NUMBER: P312880

CATALOG NUMBER: 22FCZ2-44HE-UNV-L83050-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	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°	3177	3177	3177
5°	3158	3180	3189
10°	3139	3171	3189
15°	3102	3148	3181
20°	3058	3125	3174
25°	3010	3105	3170
30°	2941	3056	3166
35°	2877	3021	3170
40°	2804	2982	3183
45°	2775	2955	3211
50°	2651	2933	3257
55°	2624	2924	3327
60°	2475	2919	3418
65°	2402	2939	3571
70°	2306	3008	3790
75°	2101	3099	4080
80°	1801	3211	4124
85°	1457	3069	3535



TEST NUMBER: P312880

CATALOG NUMBER: 22FCZ2-44HE-UNV-L83050-CP187-W2A-U-3000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	111.7	3.2
10°-20°	318.7	9.1
20°-30°	479.7	13.6
30°-40°	575.7	16.4
40°-50°	601.7	17.1
50°-60°	560.8	15.9
60°-70°	459.9	13.1
70°-80°	309.9	8.8
80°-90°	100.9	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°	910.1	25.9
0°-40°	1485.8	42.2
0°-60°	2648.2	75.3
0°-90°	3519.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3519.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1181	1181	1181	1181	1181	
5°	1169	1172	1177	1179	1181	111
15°	1113	1120	1130	1140	1142	315
25°	1014	1021	1046	1061	1068	466
35°	876	888	920	952	965	548
45°	729	734	776	824	844	557
55°	559	569	623	682	709	495
65°	377	394	462	529	561	375
75°	202	224	298	366	392	212
85°	47	67	99	116	114	56
90°	0	0	0	0	0	



TEST NUMBER: P312880

CATALOG NUMBER: 22FCZ2-44HE-UNV-L83050-CP187-W2A-U-3000K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1180.7	1180.7	1180.7	1180.7	1180.7
2.5°	1173.9	1177.3	1182.3	1184.0	1184.0
5°	1168.9	1172.2	1177.3	1179.0	1180.7
7.5°	1160.4	1163.8	1170.5	1173.9	1175.6
10°	1148.7	1152.0	1160.4	1165.5	1167.2
12.5°	1133.5	1136.9	1147.0	1153.7	1155.4
15°	1113.3	1120.0	1130.1	1140.2	1141.9
17.5°	1099.8	1098.1	1111.6	1123.4	1126.8
20°	1067.8	1076.2	1091.4	1104.9	1108.2
22.5°	1040.9	1047.6	1067.8	1083.0	1089.7
25°	1013.9	1020.7	1045.9	1061.1	1067.8
27.5°	980.2	990.3	1013.9	1035.8	1044.2
30°	946.5	956.7	983.6	1008.9	1019.0
32.5°	912.9	924.6	953.3	980.2	992.0
35°	875.8	887.6	919.6	951.6	965.1
37.5°	837.1	852.2	885.9	921.3	936.4
40°	798.3	813.5	848.9	889.3	906.1
42.5°	766.3	773.1	813.5	857.3	874.1
45°	729.3	734.3	776.4	823.6	843.8
47.5°	675.4	693.9	739.4	791.6	811.8
50°	633.3	653.5	700.6	756.2	778.1
52.5°	597.9	611.4	663.6	719.2	744.4
55°	559.2	569.3	623.2	682.1	709.1
57.5°	512.0	530.5	584.4	645.1	672.0
60°	459.8	483.4	542.3	608.0	635.0
62.5°	426.1	439.6	503.6	569.3	599.6
65°	377.3	394.1	461.5	528.9	560.9
67.5°	336.8	353.7	422.7	490.1	522.1
70°	293.1	309.9	382.3	449.7	481.7
72.5°	242.5	266.1	341.9	409.3	443.0
75°	202.1	224.0	298.1	365.5	392.4
77.5°	156.6	185.3	254.3	309.9	330.1
80°	116.2	144.8	207.2	247.6	266.1
82.5°	79.2	107.8	155.0	185.3	195.4
85°	47.2	67.4	99.4	116.2	114.5
87.5°	21.9	28.6	40.4	40.4	38.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)