

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: P308814

Luminaire Tested: **22FCZ2-39HE-UNV-L82765-CP187-W2A-U-5700K**

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: P308814
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-5700K
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: 3461.0 lumens
Efficiency: N/A
Efficacy: 103.9 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

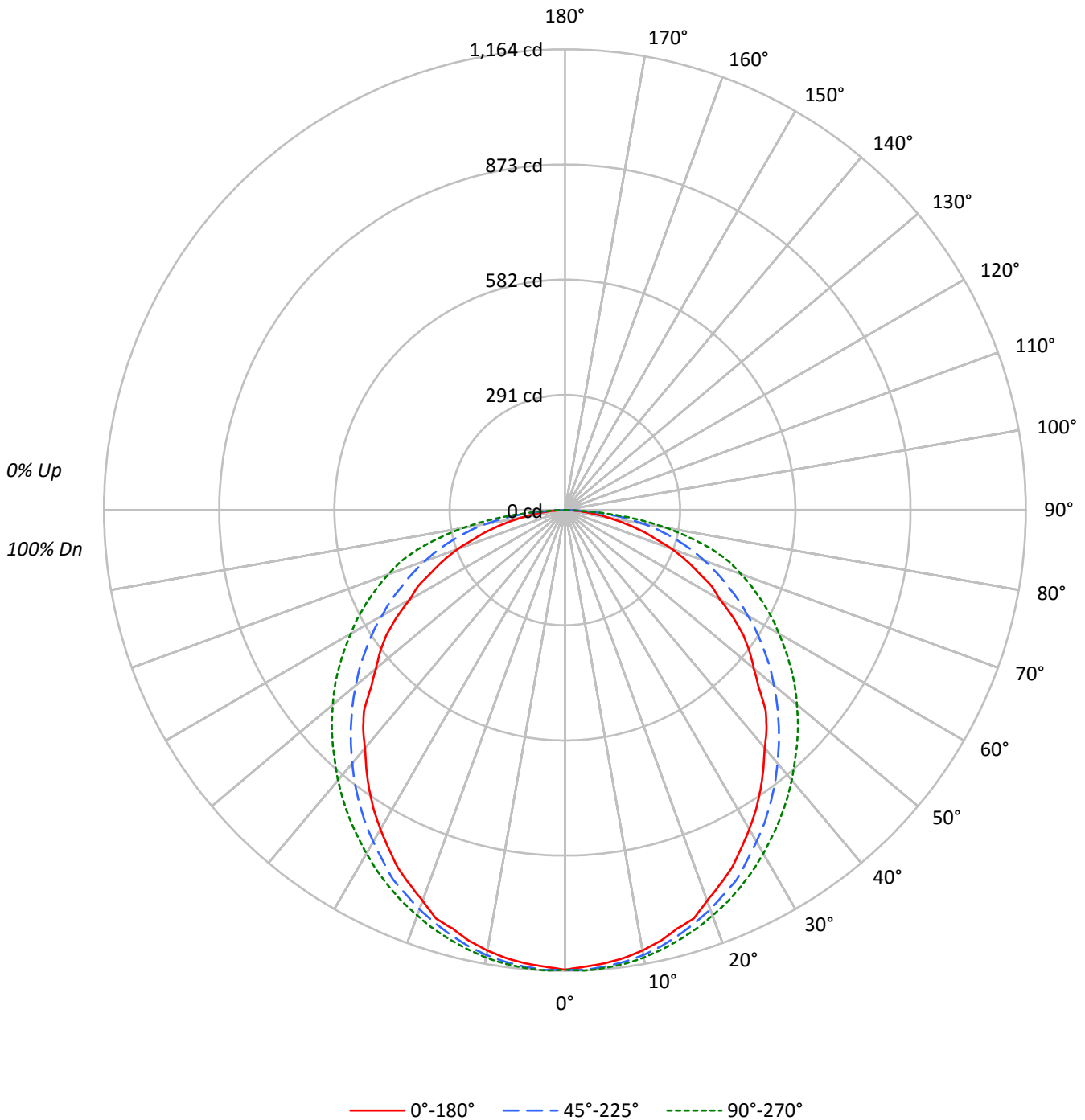
Input Watts (W): 33.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P308814

CATALOG NUMBER: 22FCZ2-39HE-UNV-L82765-CP187-W2A-U-5700K

Luminous Intensity Polar Plot





TEST NUMBER: P308814

CATALOG NUMBER: 22FCZ2-39HE-UNV-L82765-CP187-W2A-U-5700K

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°	3125	3125	3125
5°	3105	3128	3137
10°	3087	3119	3137
15°	3050	3097	3129
20°	3007	3074	3121
25°	2961	3054	3118
30°	2893	3006	3114
35°	2830	2971	3118
40°	2758	2933	3131
45°	2730	2906	3158
50°	2607	2885	3204
55°	2580	2875	3272
60°	2434	2871	3361
65°	2363	2890	3512
70°	2268	2958	3728
75°	2067	3048	4013
80°	1771	3157	4055
85°	1433	3017	3477



TEST NUMBER: P308814

CATALOG NUMBER: 22FCZ2-39HE-UNV-L82765-CP187-W2A-U-5700K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	109.9	3.2
10°-20°	313.4	9.1
20°-30°	471.8	13.6
30°-40°	566.2	16.4
40°-50°	591.8	17.1
50°-60°	551.5	15.9
60°-70°	452.3	13.1
70°-80°	304.8	8.8
80°-90°	99.3	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°	895.1	25.9
0°-40°	1461.3	42.2
0°-60°	2604.6	75.3
0°-90°	3461.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3461.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1161	1161	1161	1161	1161	
5°	1150	1153	1158	1160	1161	109
15°	1095	1102	1112	1121	1123	309
25°	997	1004	1029	1044	1050	458
35°	861	873	904	936	949	539
45°	717	722	764	810	830	548
55°	550	560	613	671	697	487
65°	371	388	454	520	552	369
75°	199	220	293	360	386	209
85°	46	66	98	114	113	55
90°	0	0	0	0	0	



TEST NUMBER: P308814

CATALOG NUMBER: 22FCZ2-39HE-UNV-L82765-CP187-W2A-U-5700K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1161.2	1161.2	1161.2	1161.2	1161.2
2.5°	1154.6	1157.9	1162.9	1164.5	1164.5
5°	1149.6	1152.9	1157.9	1159.5	1161.2
7.5°	1141.3	1144.6	1151.3	1154.6	1156.2
10°	1129.7	1133.0	1141.3	1146.3	1147.9
12.5°	1114.8	1118.1	1128.1	1134.7	1136.3
15°	1094.9	1101.6	1111.5	1121.4	1123.1
17.5°	1081.7	1080.0	1093.3	1104.9	1108.2
20°	1050.2	1058.5	1073.4	1086.7	1090.0
22.5°	1023.7	1030.3	1050.2	1065.1	1071.7
25°	997.2	1003.8	1028.7	1043.6	1050.2
27.5°	964.1	974.0	997.2	1018.7	1027.0
30°	930.9	940.9	967.4	992.2	1002.2
32.5°	897.8	909.4	937.6	964.1	975.7
35°	861.4	873.0	904.4	935.9	949.2
37.5°	823.3	838.2	871.3	906.1	921.0
40°	785.2	800.1	834.9	874.6	891.2
42.5°	753.7	760.3	800.1	843.2	859.7
45°	717.3	722.2	763.6	810.0	829.9
47.5°	664.2	682.5	727.2	778.5	798.4
50°	622.8	642.7	689.1	743.8	765.3
52.5°	588.1	601.3	652.7	707.3	732.2
55°	550.0	559.9	612.9	670.9	697.4
57.5°	503.6	521.8	574.8	634.4	660.9
60°	452.2	475.4	533.4	598.0	624.5
62.5°	419.1	432.3	495.3	559.9	589.7
65°	371.1	387.6	453.9	520.1	551.6
67.5°	331.3	347.9	415.8	482.0	513.5
70°	288.2	304.8	376.0	442.3	473.8
72.5°	238.5	261.7	336.3	402.5	435.7
75°	198.8	220.3	293.2	359.5	386.0
77.5°	154.1	182.2	250.1	304.8	324.7
80°	114.3	142.5	203.7	243.5	261.7
82.5°	77.9	106.0	152.4	182.2	192.2
85°	46.4	66.3	97.7	114.3	112.6
87.5°	21.5	28.2	39.8	39.8	38.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)