

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: P309078

Luminaire Tested: **22FCZ2-39HE-UNV-L82765-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: P309078
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-L82765-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: 3305.0 lumens
Efficiency: N/A
Efficacy: 102.6 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

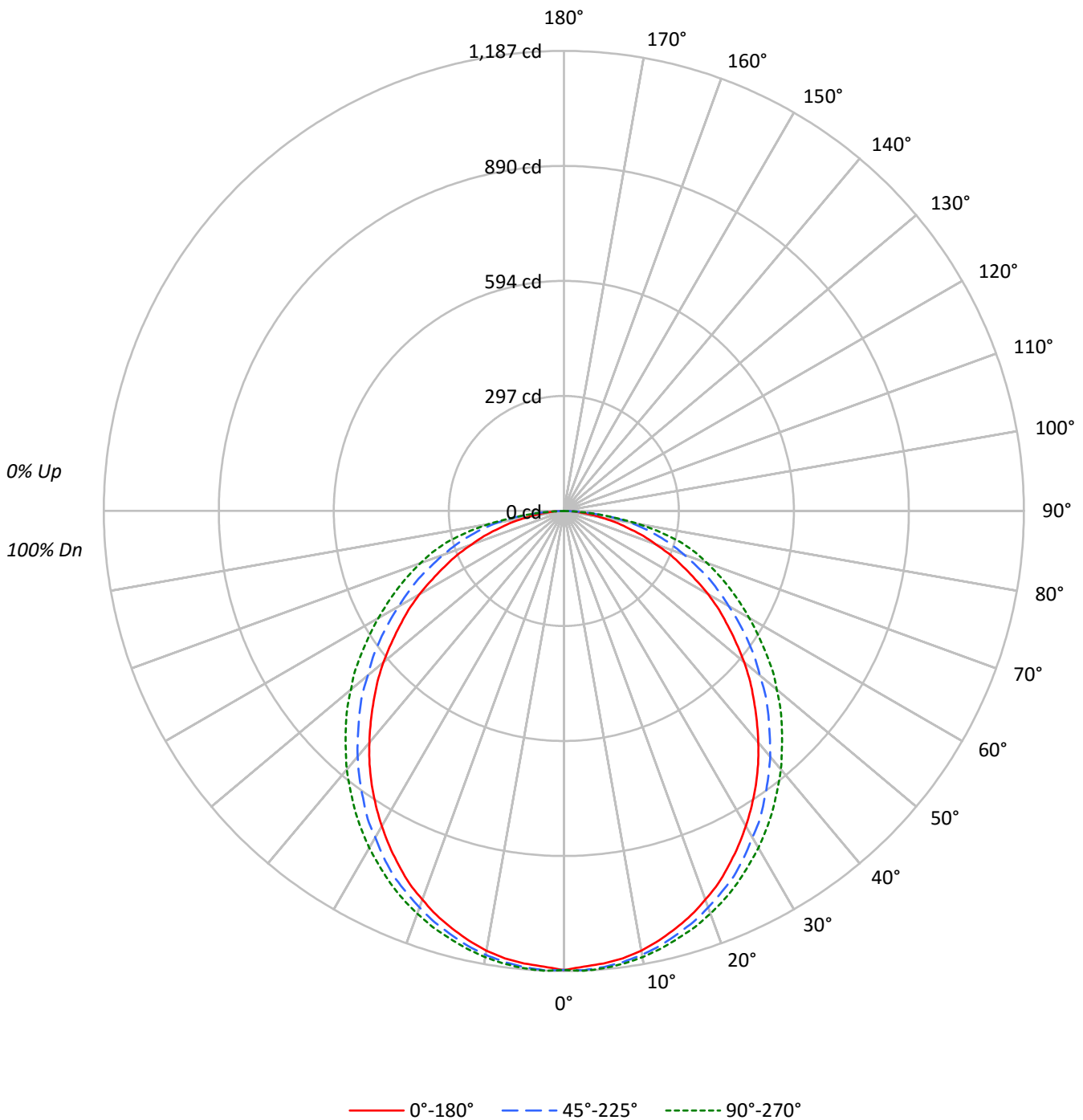
Input Watts (W): 32.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P309078

CATALOG NUMBER: 22FCZ2-39HE-UNV-L82765-S-CP187-W2A-U-3000K

Luminous Intensity Polar Plot





TEST NUMBER: P309078

CATALOG NUMBER: 22FCZ2-39HE-UNV-L82765-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°	3187	3187	3187
5°	3166	3191	3199
10°	3148	3177	3194
15°	3106	3149	3179
20°	3056	3118	3166
25°	2994	3086	3146
30°	2918	3023	3119
35°	2837	2968	3090
40°	2741	2909	3061
45°	2641	2840	3028
50°	2544	2763	3002
55°	2424	2713	2981
60°	2315	2647	2971
65°	2160	2632	3005
70°	1990	2608	3094
75°	1796	2645	3254
80°	1553	2724	3059
85°	1284	2285	2285



TEST NUMBER: P309078

CATALOG NUMBER: 22FCZ2-39HE-UNV-L82765-S-CP187-W2A-U-3000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	112.0	3.4
10°-20°	318.7	9.6
20°-30°	476.9	14.4
30°-40°	564.7	17.1
40°-50°	575.6	17.4
50°-60°	515.8	15.6
60°-70°	403.9	12.2
70°-80°	260.4	7.9
80°-90°	76.9	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°	907.6	27.5
0°-40°	1472.4	44.5
0°-60°	2563.8	77.6
0°-90°	3305.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3305.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1184	1184	1184	1184	1184	
5°	1172	1175	1181	1183	1184	111
15°	1115	1121	1130	1140	1141	314
25°	1008	1018	1039	1053	1059	464
35°	864	874	904	931	941	540
45°	694	709	746	785	796	536
55°	517	534	578	618	635	463
65°	339	359	413	453	472	337
75°	173	199	254	298	313	185
85°	42	57	74	74	74	49
90°	0	0	0	0	0	



TEST NUMBER: P309078

CATALOG NUMBER: 22FC22-39HE-UNV-L82765-S-CP187-W2A-U-3000K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1184.3	1184.3	1184.3	1184.3	1184.3
2.5°	1176.6	1179.7	1185.8	1187.4	1187.4
5°	1171.9	1175.0	1181.2	1182.7	1184.3
7.5°	1164.2	1165.8	1173.5	1176.6	1178.1
10°	1151.9	1155.0	1162.7	1167.3	1168.9
12.5°	1134.9	1139.6	1148.8	1155.0	1156.5
15°	1114.9	1121.1	1130.3	1139.6	1141.1
17.5°	1093.3	1099.5	1111.8	1122.6	1125.7
20°	1067.1	1074.8	1088.7	1101.0	1105.6
22.5°	1040.9	1047.0	1064.0	1079.4	1084.1
25°	1008.5	1017.7	1039.3	1053.2	1059.4
27.5°	974.6	985.4	1007.0	1025.5	1031.6
30°	939.1	949.9	973.0	996.2	1003.9
32.5°	902.1	914.4	942.2	965.3	973.0
35°	863.5	874.3	903.6	931.4	940.6
37.5°	823.4	832.7	866.6	895.9	905.2
40°	780.3	792.6	828.1	862.0	871.3
42.5°	737.1	751.0	786.4	823.4	832.7
45°	693.9	709.3	746.3	784.9	795.7
47.5°	652.3	664.6	706.3	743.3	758.7
50°	607.6	619.9	660.0	701.6	717.0
52.5°	561.3	578.3	621.4	661.5	680.0
55°	516.6	533.5	578.3	618.4	635.3
57.5°	474.9	488.8	535.1	576.7	593.7
60°	430.2	442.6	491.9	536.6	552.0
62.5°	382.4	400.9	451.8	493.5	512.0
65°	339.2	359.3	413.3	453.4	471.9
67.5°	299.2	317.7	370.1	413.3	433.3
70°	252.9	277.6	331.5	374.7	393.2
72.5°	215.9	237.5	293.0	336.2	356.2
75°	172.7	198.9	254.4	297.6	313.0
77.5°	137.2	163.5	215.9	249.8	257.5
80°	100.2	126.4	175.8	192.8	197.4
82.5°	67.8	92.5	126.4	131.1	132.6
85°	41.6	57.1	74.0	74.0	74.0
87.5°	20.0	23.1	26.2	24.7	24.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)