

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: P309086

Luminaire Tested: **22FCZ2-39HE-UNV-L82765-S-CP250-W2A-U-2700K**

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: P309086
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-CP250-W2A-U-2700K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.250" 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: 3186.0 lumens
Efficiency: N/A
Efficacy: 98.3 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

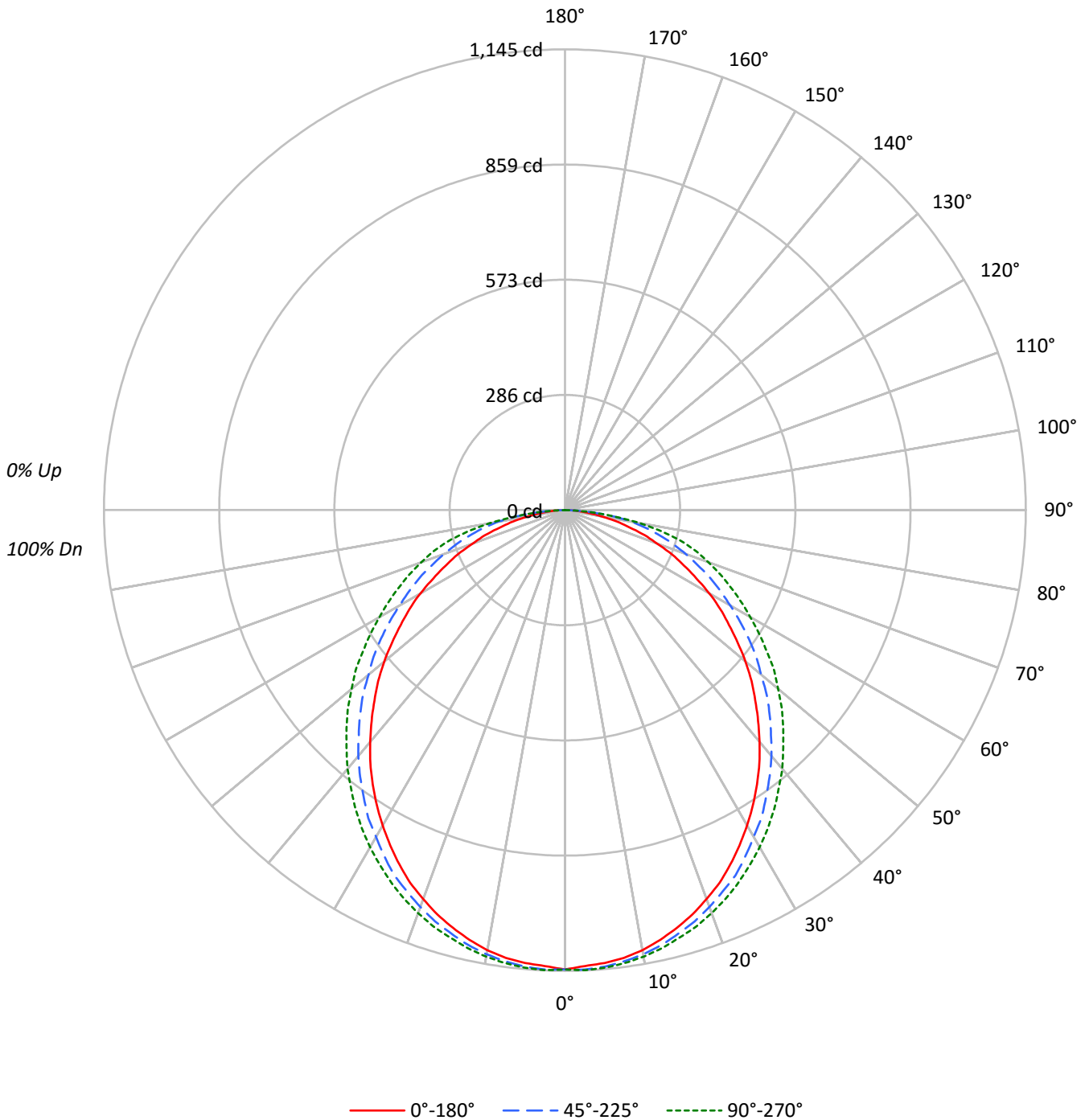
Input Watts (W): 32.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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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°	3072	3072	3072
5°	3052	3076	3084
10°	3034	3063	3079
15°	2994	3036	3064
20°	2946	3005	3052
25°	2887	2975	3032
30°	2813	2915	3007
35°	2734	2862	2979
40°	2642	2804	2950
45°	2546	2738	2919
50°	2452	2663	2894
55°	2336	2615	2873
60°	2232	2552	2864
65°	2082	2537	2897
70°	1918	2515	2983
75°	1731	2550	3138
80°	1497	2627	2949
85°	1238	2205	2205



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	108.0	3.4
10°-20°	307.2	9.6
20°-30°	459.7	14.4
30°-40°	544.4	17.1
40°-50°	554.8	17.4
50°-60°	497.3	15.6
60°-70°	389.3	12.2
70°-80°	251.1	7.9
80°-90°	74.2	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°	874.9	27.5
0°-40°	1419.4	44.5
0°-60°	2471.5	77.6
0°-90°	3186.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3186.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1142	1142	1142	1142	1142	
5°	1130	1133	1139	1140	1142	107
15°	1075	1081	1090	1098	1100	303
25°	972	981	1002	1015	1021	448
35°	832	843	871	898	907	520
45°	669	684	720	757	767	517
55°	498	514	557	596	612	446
65°	327	346	398	437	455	325
75°	166	192	245	287	302	179
85°	40	55	71	71	71	47
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1141.6	1141.6	1141.6	1141.6	1141.6
2.5°	1134.2	1137.2	1143.1	1144.6	1144.6
5°	1129.8	1132.7	1138.7	1140.2	1141.6
7.5°	1122.3	1123.8	1131.2	1134.2	1135.7
10°	1110.4	1113.4	1120.8	1125.3	1126.8
12.5°	1094.1	1098.5	1107.5	1113.4	1114.9
15°	1074.7	1080.7	1089.6	1098.5	1100.0
17.5°	1053.9	1059.9	1071.8	1082.2	1085.2
20°	1028.7	1036.1	1049.5	1061.4	1065.8
22.5°	1003.4	1009.3	1025.7	1040.6	1045.0
25°	972.2	981.1	1001.9	1015.3	1021.2
27.5°	939.5	949.9	970.7	988.5	994.5
30°	905.3	915.7	938.0	960.3	967.7
32.5°	869.6	881.5	908.3	930.6	938.0
35°	832.4	842.9	871.1	897.9	906.8
37.5°	793.8	802.7	835.4	863.7	872.6
40°	752.2	764.1	798.3	831.0	839.9
42.5°	710.6	723.9	758.1	793.8	802.7
45°	668.9	683.8	719.5	756.6	767.0
47.5°	628.8	640.7	680.8	716.5	731.4
50°	585.7	597.6	636.2	676.4	691.2
52.5°	541.1	557.4	599.1	637.7	655.6
55°	498.0	514.3	557.4	596.1	612.4
57.5°	457.8	471.2	515.8	556.0	572.3
60°	414.7	426.6	474.2	517.3	532.2
62.5°	368.7	386.5	435.5	475.7	493.5
65°	327.0	346.4	398.4	437.0	454.9
67.5°	288.4	306.2	356.8	398.4	417.7
70°	243.8	267.6	319.6	361.2	379.1
72.5°	208.1	228.9	282.4	324.1	343.4
75°	166.5	191.8	245.3	286.9	301.8
77.5°	132.3	157.6	208.1	240.8	248.2
80°	96.6	121.9	169.5	185.8	190.3
82.5°	65.4	89.2	121.9	126.4	127.8
85°	40.1	55.0	71.4	71.4	71.4
87.5°	19.3	22.3	25.3	23.8	23.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)