

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: P308791

Luminaire Tested: **22FCZ2-39HE-UNV-L82765-CA125-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: P308791
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-CA125-W2A-U-3500K
Description: 2'X2' TROFFER LED MODULE, RIBBED LENS, 0.125" ACRYLIC 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: 3452.0 lumens
Efficiency: N/A
Efficacy: 105.9 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

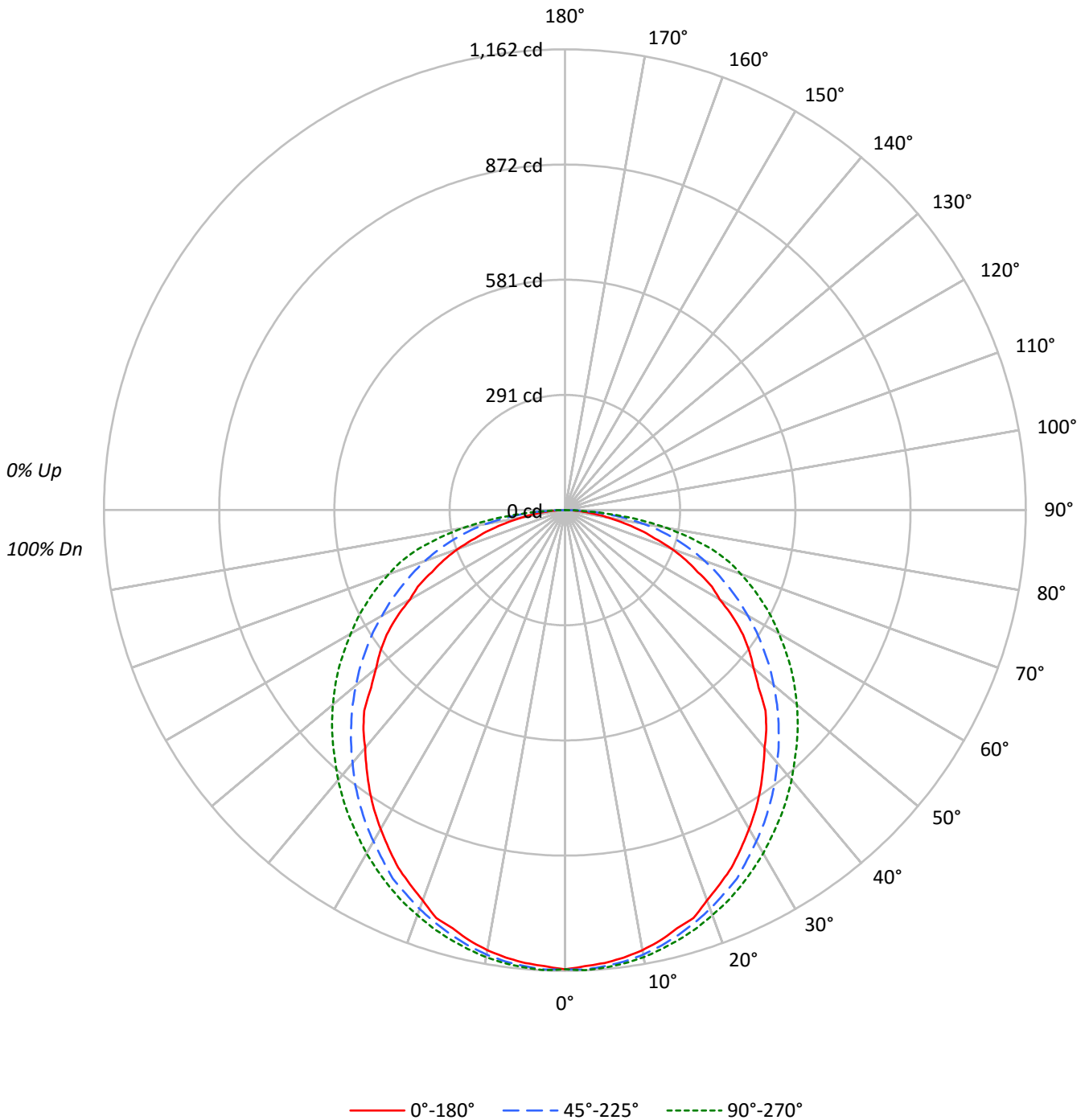
Input Watts (W): 32.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	3117	3117	3117
5°	3097	3120	3129
10°	3079	3110	3129
15°	3042	3088	3121
20°	3000	3066	3113
25°	2953	3046	3110
30°	2885	2998	3106
35°	2822	2963	3110
40°	2751	2925	3123
45°	2723	2899	3150
50°	2601	2877	3195
55°	2573	2868	3263
60°	2427	2863	3352
65°	2357	2883	3503
70°	2262	2950	3718
75°	2062	3040	4003
80°	1767	3149	4045
85°	1430	3010	3467



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	109.6	3.2
10°-20°	312.6	9.1
20°-30°	470.5	13.6
30°-40°	564.7	16.4
40°-50°	590.2	17.1
50°-60°	550.1	15.9
60°-70°	451.2	13.1
70°-80°	304.0	8.8
80°-90°	99.0	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°	892.8	25.9
0°-40°	1457.5	42.2
0°-60°	2597.8	75.3
0°-90°	3452.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3452.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1158	1158	1158	1158	1158	
5°	1147	1150	1155	1156	1158	109
15°	1092	1099	1109	1118	1120	309
25°	995	1001	1026	1041	1048	457
35°	859	871	902	934	947	537
45°	715	720	762	808	828	546
55°	548	558	611	669	696	486
65°	370	387	453	519	550	368
75°	198	220	292	358	385	208
85°	46	66	98	114	112	55
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1158.2	1158.2	1158.2	1158.2	1158.2
2.5°	1151.6	1154.9	1159.8	1161.5	1161.5
5°	1146.6	1149.9	1154.9	1156.5	1158.2
7.5°	1138.3	1141.7	1148.3	1151.6	1153.2
10°	1126.8	1130.1	1138.3	1143.3	1145.0
12.5°	1111.9	1115.2	1125.1	1131.7	1133.4
15°	1092.1	1098.7	1108.6	1118.5	1120.2
17.5°	1078.9	1077.2	1090.4	1102.0	1105.3
20°	1047.5	1055.7	1070.6	1083.8	1087.1
22.5°	1021.0	1027.7	1047.5	1062.3	1069.0
25°	994.6	1001.2	1026.0	1040.9	1047.5
27.5°	961.6	971.5	994.6	1016.1	1024.3
30°	928.5	938.4	964.9	989.7	999.6
32.5°	895.5	907.0	935.1	961.6	973.1
35°	859.1	870.7	902.1	933.5	946.7
37.5°	821.1	836.0	869.0	903.7	918.6
40°	783.1	798.0	832.7	872.3	888.9
42.5°	751.7	758.3	798.0	841.0	857.5
45°	715.4	720.3	761.7	807.9	827.7
47.5°	662.5	680.7	725.3	776.5	796.3
50°	621.2	641.0	687.3	741.8	763.3
52.5°	586.5	599.7	651.0	705.5	730.3
55°	548.5	558.4	611.3	669.1	695.6
57.5°	502.3	520.4	573.3	632.8	659.2
60°	451.0	474.2	532.0	596.4	622.9
62.5°	418.0	431.2	494.0	558.4	588.2
65°	370.1	386.6	452.7	518.8	550.2
67.5°	330.4	347.0	414.7	480.8	512.2
70°	287.5	304.0	375.0	441.1	472.5
72.5°	237.9	261.0	335.4	401.5	434.5
75°	198.3	219.7	292.4	358.5	385.0
77.5°	153.7	181.7	249.5	304.0	323.8
80°	114.0	142.1	203.2	242.9	261.0
82.5°	77.7	105.7	152.0	181.7	191.7
85°	46.3	66.1	97.5	114.0	112.3
87.5°	21.5	28.1	39.7	39.7	38.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)