

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: P312840

Luminaire Tested: **22FCZ2-39HE-UNV-L83050-CA08-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: P312840
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-L83050-CA08-W2A-U-3000K
Description: 2'X2' TROFFER LED MODULE, RIBBED LENS, 0.08" 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: 3352.0 lumens
Efficiency: N/A
Efficacy: 103.8 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

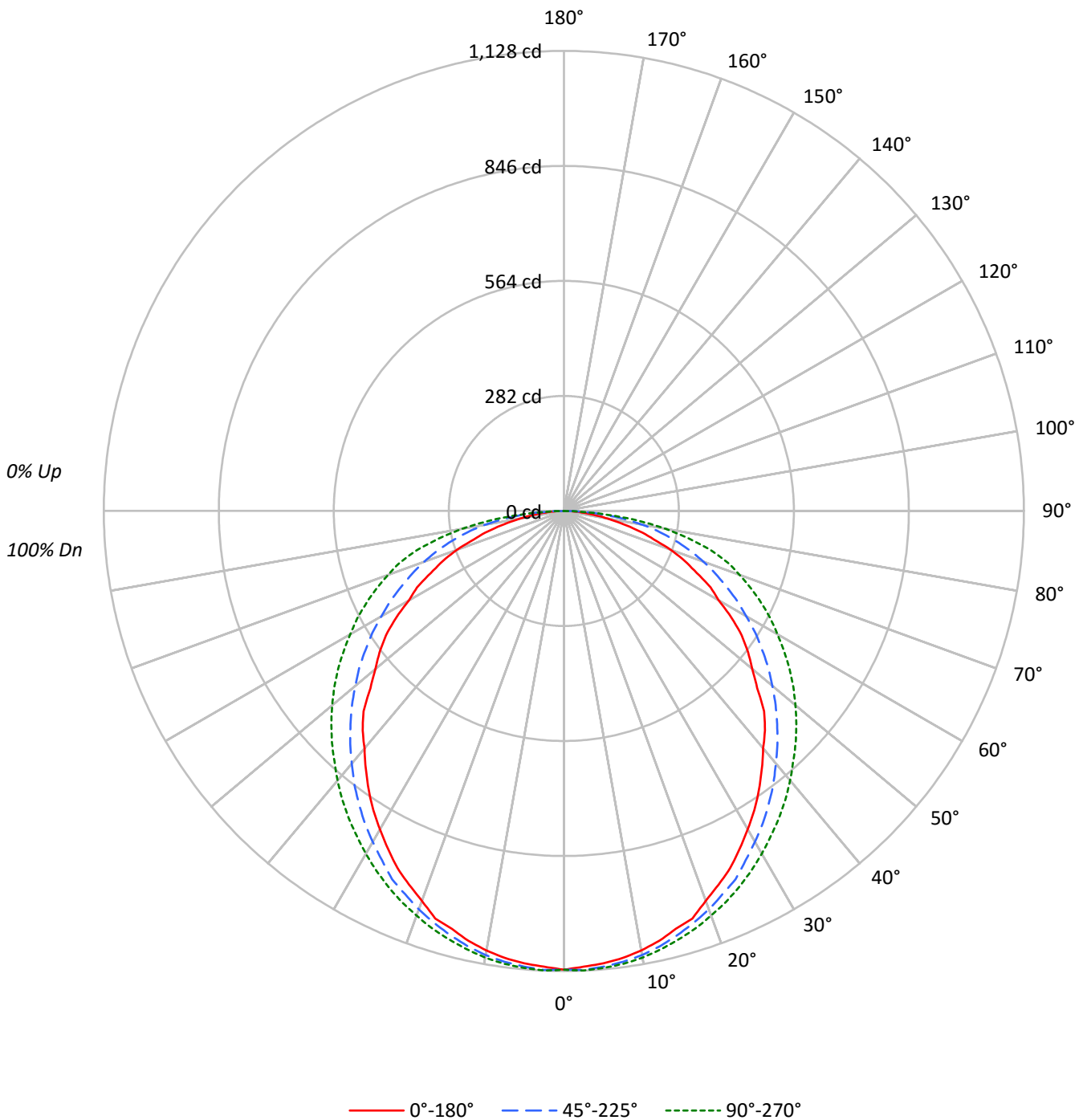
Input Watts (W): 32.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3026	3026	3026
5°	3008	3029	3038
10°	2990	3020	3038
15°	2954	2999	3030
20°	2913	2977	3023
25°	2868	2958	3020
30°	2802	2911	3016
35°	2740	2878	3020
40°	2671	2840	3032
45°	2644	2815	3059
50°	2525	2794	3103
55°	2499	2785	3169
60°	2357	2780	3255
65°	2288	2799	3401
70°	2197	2865	3610
75°	2001	2953	3886
80°	1715	3058	3928
85°	1386	2924	3369



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	106.4	3.2
10°-20°	303.6	9.1
20°-30°	456.9	13.6
30°-40°	548.4	16.4
40°-50°	573.2	17.1
50°-60°	534.1	15.9
60°-70°	438.1	13.1
70°-80°	295.2	8.8
80°-90°	96.2	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°	866.9	25.9
0°-40°	1415.3	42.2
0°-60°	2522.6	75.3
0°-90°	3352.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3352.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1125	1125	1125	1125	1125	
5°	1113	1117	1121	1123	1125	106
15°	1060	1067	1076	1086	1088	300
25°	966	972	996	1011	1017	444
35°	834	846	876	906	919	522
45°	695	700	740	784	804	531
55°	533	542	594	650	675	472
65°	359	375	440	504	534	358
75°	192	213	284	348	374	202
85°	45	64	95	111	109	53
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1124.6	1124.6	1124.6	1124.6	1124.6
2.5°	1118.2	1121.4	1126.2	1127.8	1127.8
5°	1113.4	1116.6	1121.4	1123.0	1124.6
7.5°	1105.4	1108.6	1115.0	1118.2	1119.8
10°	1094.1	1097.4	1105.4	1110.2	1111.8
12.5°	1079.7	1082.9	1092.5	1099.0	1100.6
15°	1060.5	1066.9	1076.5	1086.1	1087.7
17.5°	1047.6	1046.0	1058.8	1070.1	1073.3
20°	1017.1	1025.2	1039.6	1052.4	1055.6
22.5°	991.5	997.9	1017.1	1031.6	1038.0
25°	965.8	972.2	996.3	1010.7	1017.1
27.5°	933.7	943.3	965.8	986.7	994.7
30°	901.6	911.3	936.9	961.0	970.6
32.5°	869.5	880.8	908.0	933.7	944.9
35°	834.2	845.5	876.0	906.4	919.3
37.5°	797.3	811.8	843.9	877.6	892.0
40°	760.4	774.9	808.6	847.1	863.1
42.5°	730.0	736.4	774.9	816.6	832.6
45°	694.7	699.5	739.6	784.5	803.8
47.5°	643.3	661.0	704.3	754.0	773.3
50°	603.2	622.5	667.4	720.3	741.2
52.5°	569.5	582.4	632.1	685.0	709.1
55°	532.6	542.3	593.6	649.7	675.4
57.5°	487.7	505.4	556.7	614.5	640.1
60°	438.0	460.4	516.6	579.2	604.8
62.5°	405.9	418.7	479.7	542.3	571.1
65°	359.4	375.4	439.6	503.8	534.2
67.5°	320.9	336.9	402.7	466.9	497.3
70°	279.2	295.2	364.2	428.4	458.8
72.5°	231.0	253.5	325.7	389.8	421.9
75°	192.5	213.4	284.0	348.1	373.8
77.5°	149.2	176.5	242.3	295.2	314.4
80°	110.7	138.0	197.3	235.8	253.5
82.5°	75.4	102.7	147.6	176.5	186.1
85°	44.9	64.2	94.7	110.7	109.1
87.5°	20.9	27.3	38.5	38.5	36.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)