

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: P312990

Luminaire Tested: **22FCZ2-39HE-UNV-L83050-S-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: P312990
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-L83050-S-CA08-W2A-U-3000K
Description: 2'X2' TROFFER LED MODULE, SMOOTH 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: 3535.0 lumens
Efficiency: N/A
Efficacy: 109.4 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

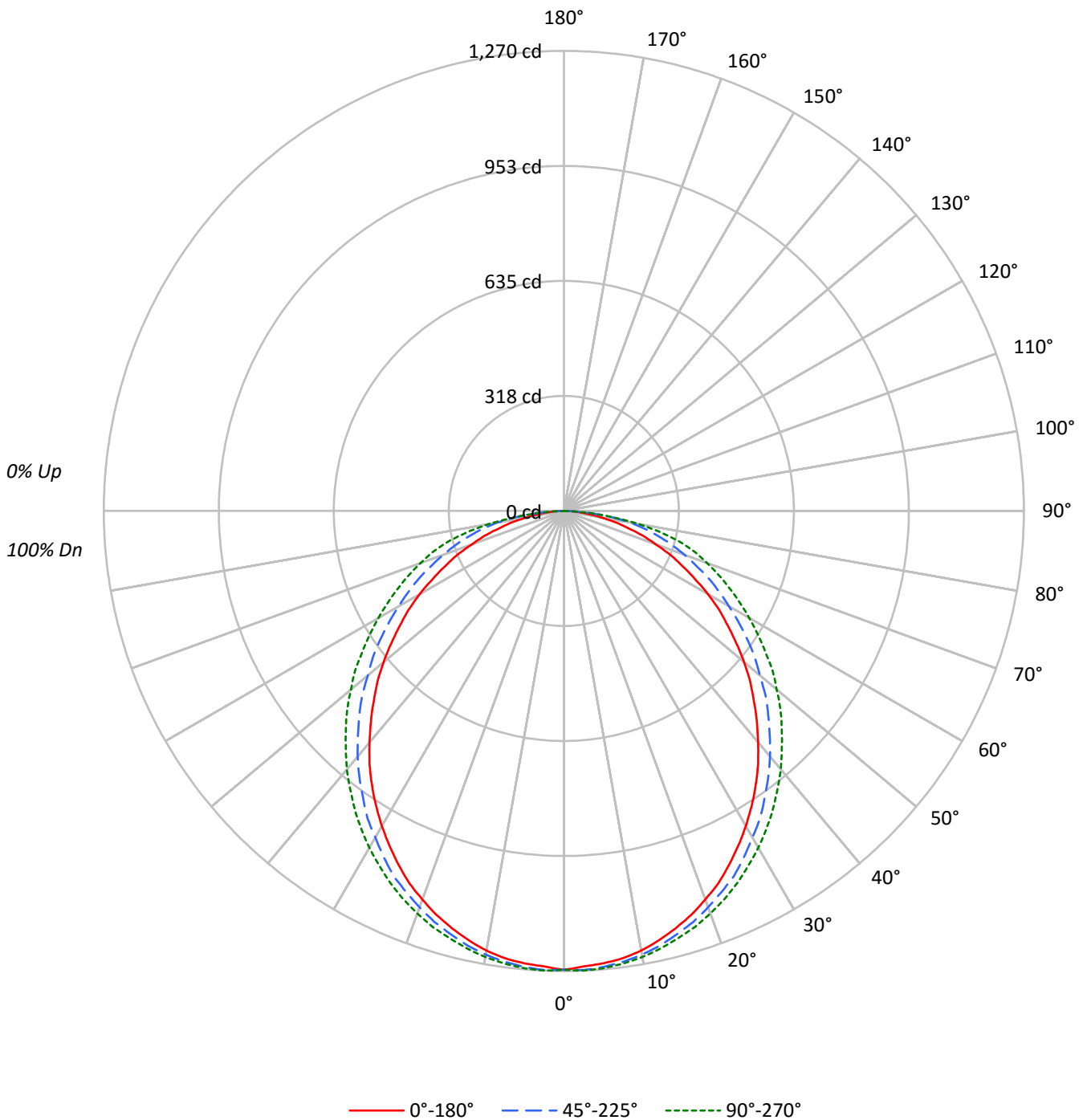
Input Watts (W): 32.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	3409	3409	3409
5°	3386	3413	3422
10°	3367	3398	3416
15°	3322	3368	3400
20°	3269	3334	3387
25°	3203	3301	3364
30°	3121	3234	3336
35°	3034	3175	3305
40°	2932	3111	3274
45°	2825	3038	3239
50°	2720	2955	3211
55°	2592	2902	3188
60°	2477	2831	3178
65°	2311	2814	3214
70°	2128	2790	3309
75°	1920	2829	3481
80°	1661	2913	3271
85°	1374	2445	2445



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	119.8	3.4
10°-20°	340.9	9.6
20°-30°	510.1	14.4
30°-40°	604.1	17.1
40°-50°	615.6	17.4
50°-60°	551.8	15.6
60°-70°	432.0	12.2
70°-80°	278.5	7.9
80°-90°	82.3	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°	970.8	27.5
0°-40°	1574.8	44.5
0°-60°	2742.2	77.6
0°-90°	3535.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3535.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1267	1267	1267	1267	1267	
5°	1254	1257	1263	1265	1267	119
15°	1192	1199	1209	1219	1220	336
25°	1079	1089	1112	1126	1133	497
35°	924	935	966	996	1006	577
45°	742	759	798	840	851	573
55°	552	571	618	661	680	495
65°	363	384	442	485	505	360
75°	185	213	272	318	335	198
85°	44	61	79	79	79	52
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1266.7	1266.7	1266.7	1266.7	1266.7
2.5°	1258.5	1261.8	1268.4	1270.0	1270.0
5°	1253.5	1256.8	1263.4	1265.1	1266.7
7.5°	1245.3	1246.9	1255.2	1258.5	1260.1
10°	1232.1	1235.4	1243.6	1248.6	1250.2
12.5°	1213.9	1218.9	1228.8	1235.4	1237.0
15°	1192.5	1199.1	1209.0	1218.9	1220.5
17.5°	1169.4	1176.0	1189.2	1200.7	1204.0
20°	1141.4	1149.6	1164.4	1177.6	1182.6
22.5°	1113.3	1119.9	1138.1	1154.5	1159.5
25°	1078.7	1088.6	1111.7	1126.5	1133.1
27.5°	1042.4	1053.9	1077.0	1096.8	1103.4
30°	1004.5	1016.0	1040.7	1065.5	1073.7
32.5°	964.9	978.1	1007.8	1032.5	1040.7
35°	923.6	935.2	966.5	996.2	1006.1
37.5°	880.8	890.6	926.9	958.3	968.2
40°	834.6	847.8	885.7	922.0	931.9
42.5°	788.4	803.2	841.2	880.8	890.6
45°	742.2	758.7	798.3	839.5	851.1
47.5°	697.7	710.9	755.4	795.0	811.5
50°	649.8	663.0	705.9	750.5	766.9
52.5°	600.4	618.5	664.7	707.6	727.4
55°	552.5	570.7	618.5	661.4	679.5
57.5°	508.0	522.8	572.3	616.9	635.0
60°	460.2	473.4	526.1	574.0	590.5
62.5°	409.0	428.8	483.3	527.8	547.6
65°	362.9	384.3	442.0	484.9	504.7
67.5°	320.0	339.8	395.8	442.0	463.5
70°	270.5	296.9	354.6	400.8	420.6
72.5°	230.9	254.0	313.4	359.6	381.0
75°	184.7	212.8	272.1	318.3	334.8
77.5°	146.8	174.8	230.9	267.2	275.4
80°	107.2	135.2	188.0	206.2	211.1
82.5°	72.6	99.0	135.2	140.2	141.8
85°	44.5	61.0	79.2	79.2	79.2
87.5°	21.4	24.7	28.0	26.4	26.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)