

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: P312996

Luminaire Tested: **22FCZ2-39HE-UNV-L83050-S-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: P312996
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-CA125-W2A-U-3500K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.125" ACRYLIC SHEET
Light Source: (168) 3500K 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: 3728.0 lumens
Efficiency: N/A
Efficacy: 115.1 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

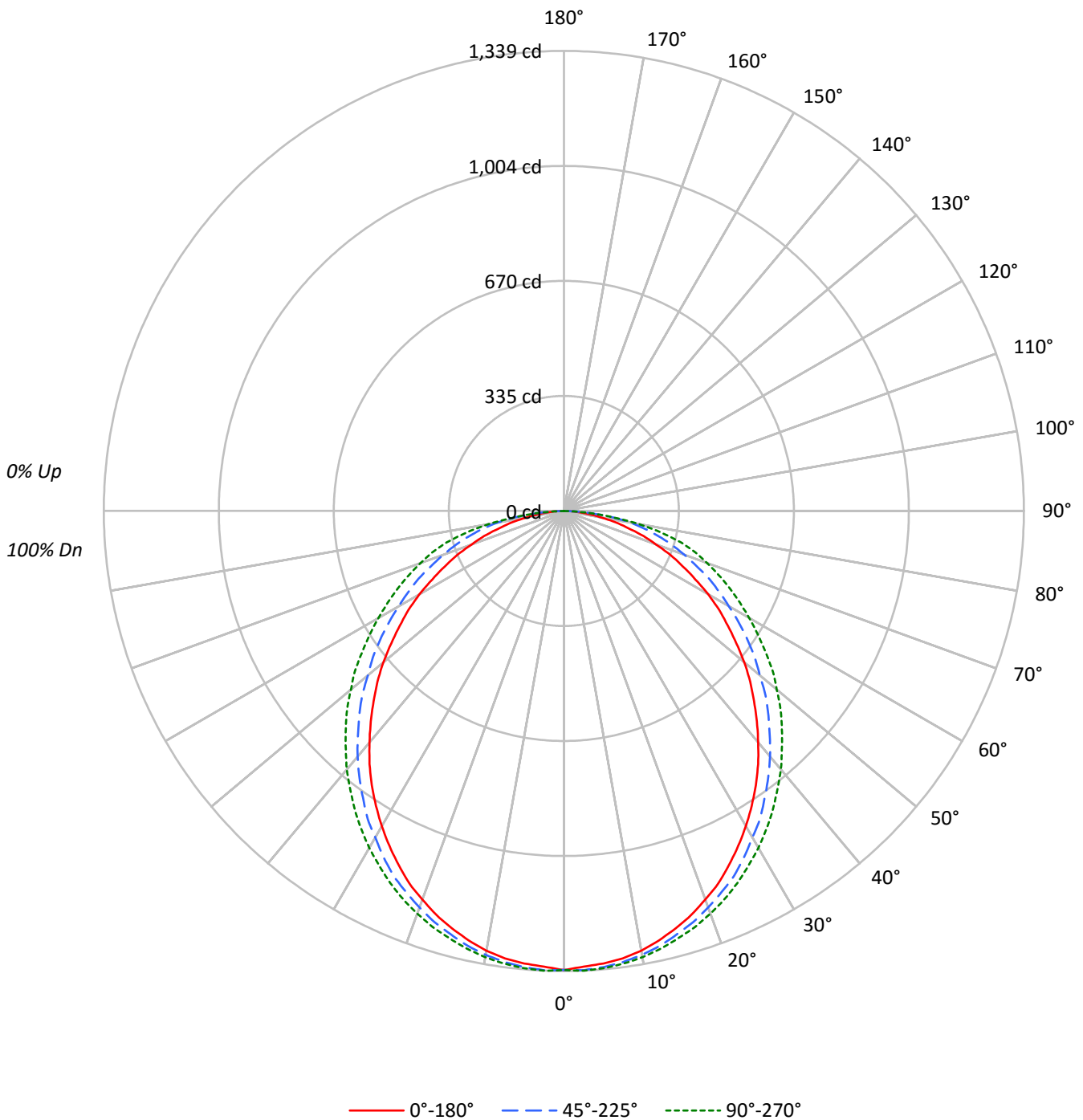
Input Watts (W): 32.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3595	3595	3595
5°	3571	3599	3609
10°	3550	3584	3603
15°	3504	3552	3586
20°	3447	3517	3571
25°	3378	3481	3548
30°	3292	3411	3518
35°	3200	3348	3485
40°	3092	3281	3452
45°	2979	3204	3416
50°	2869	3117	3386
55°	2734	3060	3362
60°	2612	2986	3351
65°	2437	2968	3389
70°	2245	2943	3489
75°	2025	2984	3671
80°	1753	3073	3450
85°	1451	2578	2578



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	126.3	3.4
10°-20°	359.5	9.6
20°-30°	537.9	14.4
30°-40°	637.0	17.1
40°-50°	649.2	17.4
50°-60°	581.9	15.6
60°-70°	455.6	12.2
70°-80°	293.8	7.9
80°-90°	86.8	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°	1023.8	27.5
0°-40°	1660.8	44.5
0°-60°	2891.9	77.6
0°-90°	3728.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3728.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1336	1336	1336	1336	1336	
5°	1322	1325	1332	1334	1336	126
15°	1258	1264	1275	1285	1287	355
25°	1138	1148	1172	1188	1195	524
35°	974	986	1019	1051	1061	609
45°	783	800	842	885	898	604
55°	583	602	652	698	717	522
65°	383	405	466	511	532	380
75°	195	224	287	336	353	209
85°	47	64	84	84	84	55
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1335.9	1335.9	1335.9	1335.9	1335.9
2.5°	1327.2	1330.6	1337.6	1339.3	1339.3
5°	1321.9	1325.4	1332.4	1334.1	1335.9
7.5°	1313.2	1315.0	1323.7	1327.2	1328.9
10°	1299.3	1302.8	1311.5	1316.7	1318.5
12.5°	1280.2	1285.4	1295.9	1302.8	1304.5
15°	1257.6	1264.5	1275.0	1285.4	1287.2
17.5°	1233.2	1240.2	1254.1	1266.3	1269.8
20°	1203.7	1212.4	1228.0	1241.9	1247.1
22.5°	1174.1	1181.1	1200.2	1217.6	1222.8
25°	1137.6	1148.0	1172.4	1188.0	1195.0
27.5°	1099.3	1111.5	1135.8	1156.7	1163.7
30°	1059.3	1071.5	1097.6	1123.7	1132.3
32.5°	1017.5	1031.5	1062.8	1088.9	1097.6
35°	974.1	986.2	1019.3	1050.6	1061.0
37.5°	928.8	939.3	977.5	1010.6	1021.0
40°	880.1	894.1	934.1	972.3	982.8
42.5°	831.4	847.1	887.1	928.8	939.3
45°	782.7	800.1	841.9	885.4	897.5
47.5°	735.8	749.7	796.6	838.4	855.8
50°	685.3	699.2	744.5	791.4	808.8
52.5°	633.1	652.3	701.0	746.2	767.1
55°	582.7	601.8	652.3	697.5	716.6
57.5°	535.7	551.4	603.6	650.5	669.7
60°	485.3	499.2	554.9	605.3	622.7
62.5°	431.4	452.2	509.6	556.6	577.5
65°	382.7	405.3	466.2	511.4	532.3
67.5°	337.4	358.3	417.5	466.2	488.8
70°	285.3	313.1	374.0	422.7	443.5
72.5°	243.5	267.9	330.5	379.2	401.8
75°	194.8	224.4	287.0	335.7	353.1
77.5°	154.8	184.4	243.5	281.8	290.5
80°	113.1	142.6	198.3	217.4	222.6
82.5°	76.5	104.4	142.6	147.8	149.6
85°	47.0	64.4	83.5	83.5	83.5
87.5°	22.6	26.1	29.6	27.8	27.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)