

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: P312392

Luminaire Tested: **14FCZ2-39-UNV-L83050-S-CA08-W2A-U-4000K**

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: P312392
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-40)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 14FCZ2-39-UNV-L83050-S-CA08-W2A-U-4000K
Description: 1'X4' TROFFER LED MODULE,SMOOTH LENS, 0.08" ACRYLIC SHEET
Light Source: (168) 4000K 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

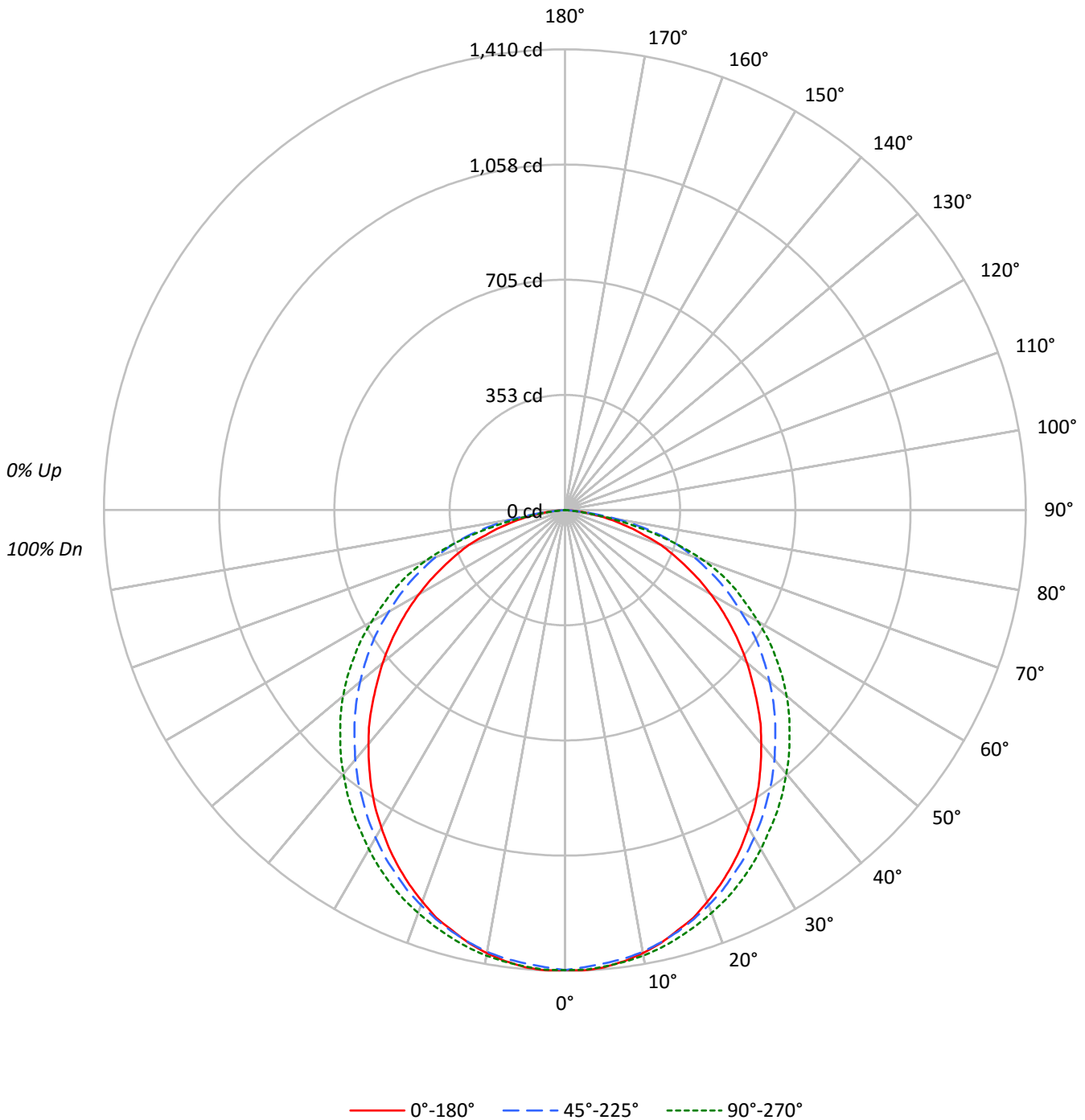
Lumens per Lamp: N/A
Luminaire Lumens: 3944.0 lumens
Efficiency: N/A
Efficacy: 115.7 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.26 / 1.36
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 34.1
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	109	104	100	96	106	102	98	94	97	94	91	94	91	89	90	88	86	84
2	99	90	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	70
3	90	79	71	65	87	78	70	64	75	68	63	72	66	62	69	65	61	58
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	50
5	76	63	54	47	74	62	53	47	59	52	46	57	51	46	56	50	45	43
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	38
7	65	51	42	36	63	50	42	36	49	41	36	47	41	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	32	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	52	39	31	26	38	31	26	37	31	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3789	3789	3789
5°	3793	3761	3787
10°	3762	3751	3783
15°	3710	3721	3770
20°	3651	3685	3757
25°	3577	3640	3745
30°	3488	3597	3725
35°	3392	3546	3713
40°	3283	3503	3703
45°	3163	3460	3699
50°	3045	3422	3708
55°	2917	3394	3697
60°	2778	3347	3673
65°	2614	3337	3673
70°	2462	3308	3570
75°	2135	3232	3049
80°	1728	2607	2030
85°	1149	905	605



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	133.0	3.4
10°-20°	378.3	9.6
20°-30°	567.5	14.4
30°-40°	677.0	17.2
40°-50°	699.8	17.7
50°-60°	639.0	16.2
60°-70°	502.8	12.7
70°-80°	292.7	7.4
80°-90°	53.9	1.4
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°	1078.8	27.4
0°-40°	1755.7	44.5
0°-60°	3094.5	78.5
0°-90°	3944.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3944.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1408	1408	1408	1408	1408	
5°	1404	1400	1392	1404	1402	133
15°	1332	1334	1336	1353	1353	376
25°	1205	1210	1226	1255	1261	555
35°	1032	1046	1079	1120	1130	645
45°	831	858	909	960	972	642
55°	622	655	724	776	788	556
65°	411	454	524	565	577	408
75°	205	254	311	305	293	218
85°	37	53	29	24	20	48
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1407.9	1407.9	1407.9	1407.9	1407.9
2.5°	1409.9	1406.0	1400.1	1409.9	1407.9
5°	1404.0	1400.1	1392.3	1404.0	1402.1
7.5°	1392.3	1388.4	1384.5	1396.2	1394.3
10°	1376.7	1374.7	1372.7	1386.4	1384.5
12.5°	1357.1	1357.1	1355.1	1370.8	1370.8
15°	1331.7	1333.6	1335.6	1353.2	1353.2
17.5°	1308.2	1306.3	1312.1	1331.7	1333.6
20°	1275.0	1278.9	1286.7	1310.2	1312.1
22.5°	1241.7	1245.6	1259.3	1282.8	1288.7
25°	1204.6	1210.4	1226.1	1255.4	1261.3
27.5°	1165.5	1173.3	1194.8	1226.1	1231.9
30°	1122.4	1134.2	1157.6	1192.8	1198.7
32.5°	1079.4	1091.2	1120.5	1155.7	1163.5
35°	1032.5	1046.2	1079.4	1120.5	1130.3
37.5°	983.6	1001.2	1040.3	1081.4	1093.1
40°	934.7	954.3	997.3	1040.3	1054.0
42.5°	885.8	905.4	952.3	1001.2	1014.9
45°	831.1	858.5	909.3	960.1	971.9
47.5°	778.3	807.6	864.3	915.2	930.8
50°	727.4	756.8	817.4	870.2	885.8
52.5°	674.6	705.9	770.5	825.2	838.9
55°	621.8	655.1	723.5	776.3	788.1
57.5°	569.0	604.2	674.6	725.5	739.2
60°	516.2	553.4	621.8	672.7	682.5
62.5°	463.4	502.6	573.0	617.9	627.7
65°	410.6	453.7	524.1	565.1	576.9
67.5°	359.8	402.8	471.3	510.4	520.2
70°	312.9	352.0	420.4	449.8	453.7
72.5°	254.2	303.1	369.6	385.2	375.5
75°	205.3	254.2	310.9	305.1	293.3
77.5°	156.4	205.3	242.5	222.9	207.3
80°	111.5	160.3	168.2	138.8	131.0
82.5°	72.4	111.5	93.9	72.4	58.7
85°	37.2	52.8	29.3	23.5	19.6
87.5°	11.7	7.8	3.9	3.9	2.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)