

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: P312407

Luminaire Tested: **14FCZ2-39-UNV-L83050-S-CP187-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: P312407
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-CP187-W2A-U-4000K
Description: 1'X4' TROFFER LED MODULE,SMOOTH LENS, 0.187" POLYCARB 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: 3691.0 lumens
Efficiency: N/A
Efficacy: 108.2 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

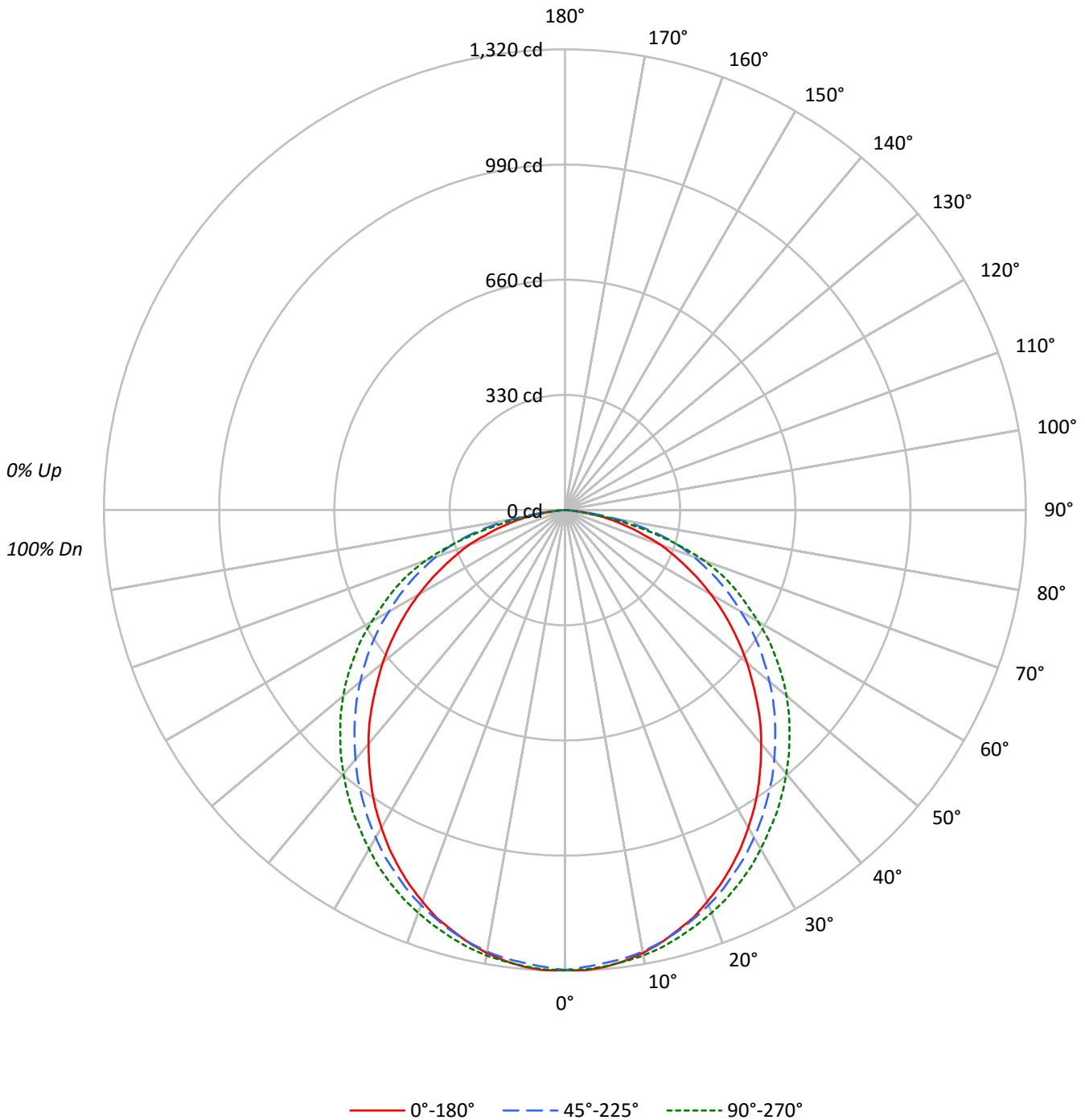
Input Watts (W): 34.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3546	3546	3546
5°	3549	3520	3544
10°	3520	3510	3540
15°	3472	3482	3528
20°	3417	3448	3517
25°	3347	3407	3505
30°	3264	3366	3486
35°	3174	3319	3475
40°	3073	3279	3465
45°	2960	3239	3461
50°	2850	3203	3471
55°	2730	3177	3460
60°	2600	3132	3437
65°	2447	3123	3438
70°	2304	3096	3341
75°	1998	3026	2854
80°	1616	2439	1900
85°	1074	849	565



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	124.4	3.4
10°-20°	354.1	9.6
20°-30°	531.1	14.4
30°-40°	633.5	17.2
40°-50°	655.0	17.7
50°-60°	598.0	16.2
60°-70°	470.6	12.7
70°-80°	273.9	7.4
80°-90°	50.5	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°	1009.6	27.4
0°-40°	1643.1	44.5
0°-60°	2896.0	78.5
0°-90°	3691.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3691.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1318	1318	1318	1318	1318	
5°	1314	1310	1303	1314	1312	125
15°	1246	1248	1250	1266	1266	352
25°	1127	1133	1147	1175	1180	519
35°	966	979	1010	1049	1058	604
45°	778	803	851	898	910	601
55°	582	613	677	726	738	520
65°	384	425	490	529	540	382
75°	192	238	291	286	274	204
85°	35	49	28	22	18	45
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1317.6	1317.6	1317.6	1317.6	1317.6
2.5°	1319.5	1315.8	1310.3	1319.5	1317.6
5°	1314.0	1310.3	1303.0	1314.0	1312.1
7.5°	1303.0	1299.3	1295.7	1306.6	1304.8
10°	1288.3	1286.5	1284.7	1297.5	1295.7
12.5°	1270.0	1270.0	1268.2	1282.9	1282.9
15°	1246.3	1248.1	1249.9	1266.4	1266.4
17.5°	1224.3	1222.5	1228.0	1246.3	1248.1
20°	1193.2	1196.8	1204.2	1226.1	1228.0
22.5°	1162.1	1165.7	1178.5	1200.5	1206.0
25°	1127.3	1132.8	1147.4	1174.9	1180.4
27.5°	1090.7	1098.0	1118.2	1147.4	1152.9
30°	1050.4	1061.4	1083.4	1116.3	1121.8
32.5°	1010.2	1021.2	1048.6	1081.6	1088.9
35°	966.3	979.1	1010.2	1048.6	1057.8
37.5°	920.5	937.0	973.6	1012.0	1023.0
40°	874.8	893.1	933.3	973.6	986.4
42.5°	829.0	847.3	891.2	937.0	949.8
45°	777.8	803.4	851.0	898.5	909.5
47.5°	728.4	755.8	808.9	856.5	871.1
50°	680.8	708.2	765.0	814.4	829.0
52.5°	631.4	660.6	721.0	772.3	785.1
55°	582.0	613.1	677.1	726.5	737.5
57.5°	532.5	565.5	631.4	678.9	691.8
60°	483.1	517.9	582.0	629.5	638.7
62.5°	433.7	470.3	536.2	578.3	587.4
65°	384.3	424.6	490.4	528.9	539.9
67.5°	336.7	377.0	441.0	477.6	486.8
70°	292.8	329.4	393.5	420.9	424.6
72.5°	237.9	283.7	345.9	360.5	351.4
75°	192.2	237.9	291.0	285.5	274.5
77.5°	146.4	192.2	226.9	208.6	194.0
80°	104.3	150.1	157.4	129.9	122.6
82.5°	67.7	104.3	87.8	67.7	54.9
85°	34.8	49.4	27.5	22.0	18.3
87.5°	11.0	7.3	3.7	3.7	1.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)