

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: P312409

Luminaire Tested: **14FCZ2-39-UNV-L83050-S-CP187-W2A-U-5000K**

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: P312409
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-5000K
Description: 1'X4' TROFFER LED MODULE,SMOOTH LENS, 0.187" POLYCARB SHEET
Light Source: (168) 5000K 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: 3726.0 lumens
Efficiency: N/A
Efficacy: 106.8 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

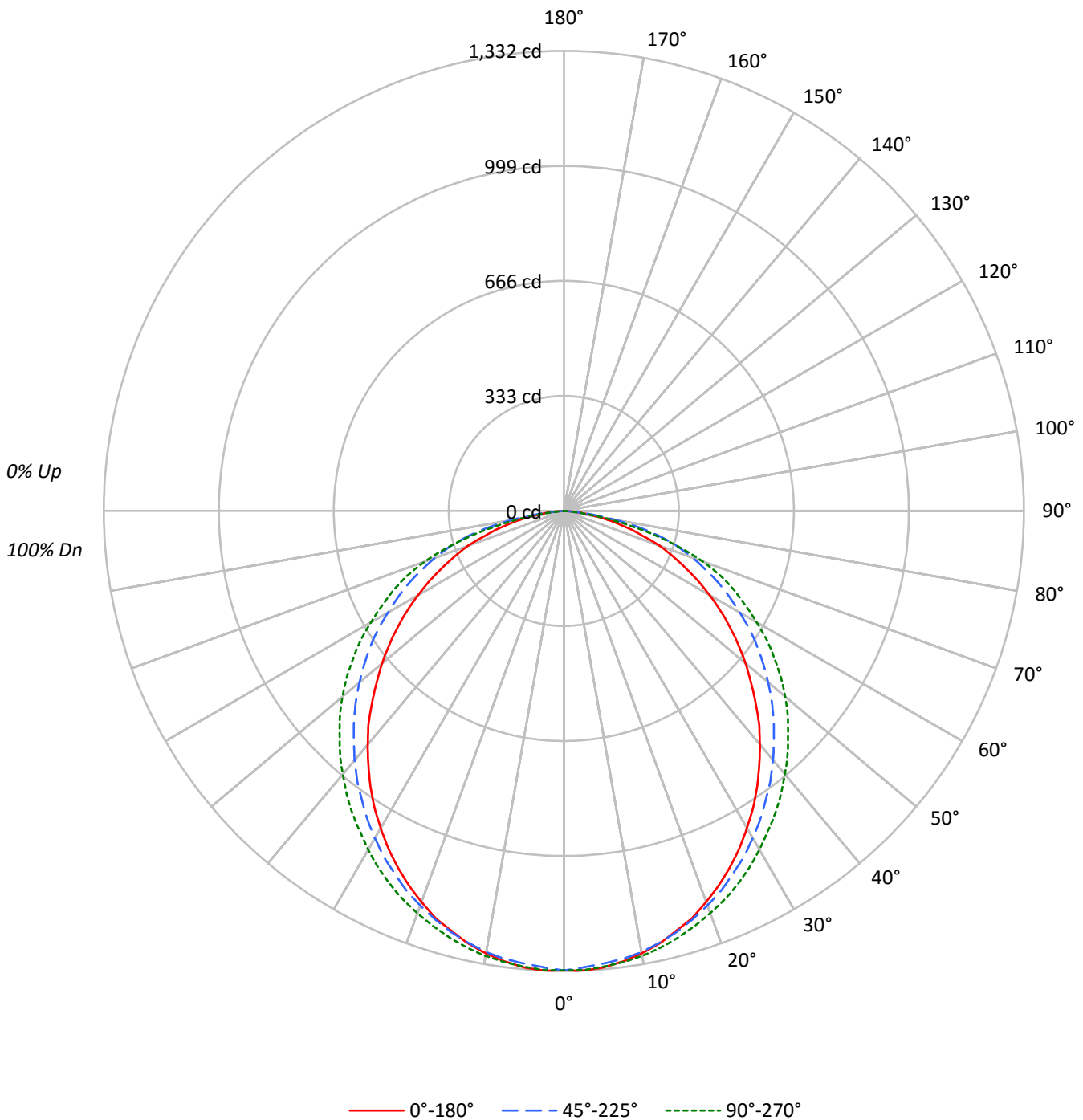
Input Watts (W): 34.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3579	3579	3579
5°	3583	3553	3578
10°	3554	3544	3574
15°	3505	3515	3562
20°	3449	3481	3550
25°	3379	3439	3538
30°	3295	3398	3519
35°	3204	3350	3508
40°	3102	3310	3498
45°	2988	3269	3494
50°	2877	3233	3504
55°	2756	3207	3493
60°	2625	3162	3470
65°	2471	3152	3470
70°	2326	3125	3372
75°	2017	3054	2881
80°	1632	2462	1918
85°	1084	855	571



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	125.6	3.4
10°-20°	357.4	9.6
20°-30°	536.1	14.4
30°-40°	639.6	17.2
40°-50°	661.2	17.7
50°-60°	603.6	16.2
60°-70°	475.0	12.7
70°-80°	276.5	7.4
80°-90°	51.0	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°	1019.1	27.4
0°-40°	1658.7	44.5
0°-60°	2923.5	78.5
0°-90°	3726.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3726.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1330	1330	1330	1330	1330	
5°	1326	1323	1315	1326	1325	126
15°	1258	1260	1262	1278	1278	355
25°	1138	1144	1158	1186	1192	524
35°	975	988	1020	1059	1068	610
45°	785	811	859	907	918	606
55°	588	619	684	733	744	525
65°	388	429	495	534	545	385
75°	194	240	294	288	277	206
85°	35	50	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°	1330.1	1330.1	1330.1	1330.1	1330.1
2.5°	1332.0	1328.3	1322.7	1332.0	1330.1
5°	1326.4	1322.7	1315.3	1326.4	1324.6
7.5°	1315.3	1311.6	1308.0	1319.0	1317.2
10°	1300.6	1298.7	1296.9	1309.8	1308.0
12.5°	1282.1	1282.1	1280.2	1295.0	1295.0
15°	1258.1	1259.9	1261.8	1278.4	1278.4
17.5°	1235.9	1234.1	1239.6	1258.1	1259.9
20°	1204.5	1208.2	1215.6	1237.8	1239.6
22.5°	1173.1	1176.8	1189.7	1211.9	1217.4
25°	1138.0	1143.5	1158.3	1186.0	1191.6
27.5°	1101.0	1108.4	1128.8	1158.3	1163.9
30°	1060.4	1071.5	1093.7	1126.9	1132.4
32.5°	1019.8	1030.8	1058.6	1091.8	1099.2
35°	975.4	988.4	1019.8	1058.6	1067.8
37.5°	929.2	945.9	982.8	1021.6	1032.7
40°	883.1	901.5	942.2	982.8	995.7
42.5°	836.9	855.3	899.7	945.9	958.8
45°	785.1	811.0	859.0	907.1	918.2
47.5°	735.3	763.0	816.5	864.6	879.4
50°	687.2	714.9	772.2	822.1	836.9
52.5°	637.3	666.9	727.9	779.6	792.5
55°	587.5	618.9	683.5	733.4	744.5
57.5°	537.6	570.8	637.3	685.4	698.3
60°	487.7	522.8	587.5	635.5	644.7
62.5°	437.8	474.8	541.3	583.8	593.0
65°	388.0	428.6	495.1	533.9	545.0
67.5°	339.9	380.6	445.2	482.2	491.4
70°	295.6	332.5	397.2	424.9	428.6
72.5°	240.2	286.3	349.2	363.9	354.7
75°	194.0	240.2	293.7	288.2	277.1
77.5°	147.8	194.0	229.1	210.6	195.8
80°	105.3	151.5	158.9	131.2	123.8
82.5°	68.4	105.3	88.7	68.4	55.4
85°	35.1	49.9	27.7	22.2	18.5
87.5°	11.1	7.4	3.7	3.7	1.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)