

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: P312258

Luminaire Tested: **14FCZ2-39-UNV-L83050-CP187-W2A-U-4500K**

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: P312258
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-49)
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-CP187-W2A-U-4500K
Description: 1'X4' TROFFER LED MODULE,RIBBED LENS, 0.187" POLYCARB SHEET
Light Source: (168) 4500K 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: 3687.0 lumens
Efficiency: N/A
Efficacy: 105.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

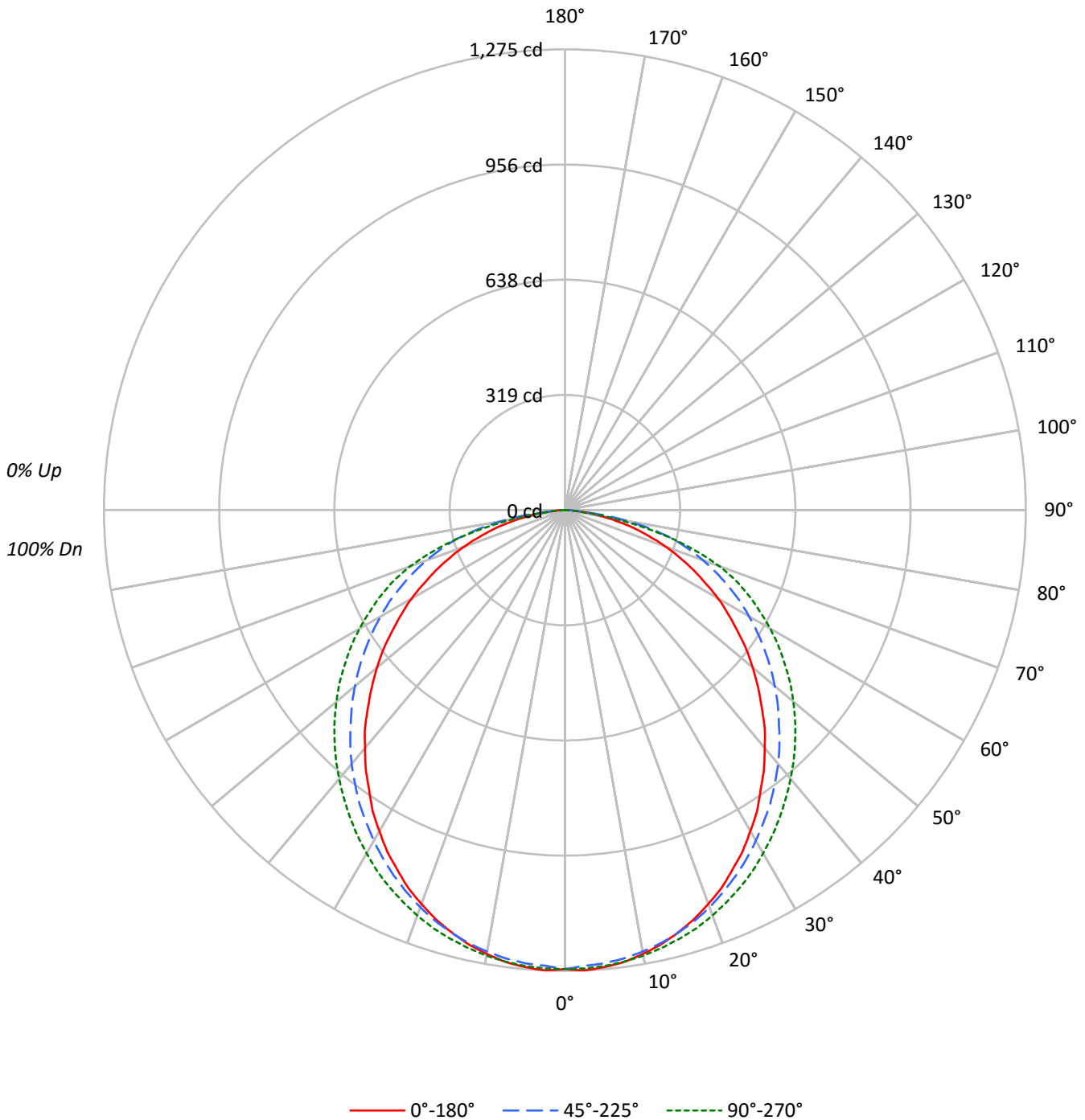
Input Watts (W): 34.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	99	95	106	101	97	94	97	94	91	93	90	88	90	87	85	83
2	98	90	83	77	96	88	82	76	84	79	74	81	77	73	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	79	68	60	53	66	58	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	52	46	59	51	45	57	50	45	55	49	44	42
6	69	56	47	40	67	55	46	40	53	45	40	51	44	39	50	44	39	37
7	64	51	42	35	63	50	41	35	48	41	35	47	40	35	45	39	34	32
8	60	46	37	32	58	45	37	31	44	37	31	43	36	31	42	35	31	29
9	56	42	34	28	54	42	34	28	41	33	28	39	33	28	38	32	28	26
10	52	39	31	26	51	39	31	26	37	30	26	37	30	25	36	30	25	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3418	3418	3418
5°	3429	3400	3420
10°	3408	3390	3421
15°	3372	3374	3419
20°	3322	3350	3418
25°	3259	3317	3415
30°	3188	3283	3408
35°	3103	3255	3406
40°	3021	3223	3411
45°	2928	3188	3429
50°	2843	3173	3452
55°	2735	3163	3483
60°	2637	3168	3531
65°	2502	3177	3586
70°	2348	3202	3584
75°	2128	3231	3240
80°	1745	2789	2306
85°	1294	1321	534



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	120.2	3.3
10°-20°	343.3	9.3
20°-30°	517.2	14.0
30°-40°	620.7	16.8
40°-50°	646.9	17.5
50°-60°	598.9	16.2
60°-70°	483.9	13.1
70°-80°	295.0	8.0
80°-90°	60.9	1.7
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°	980.8	26.6
0°-40°	1601.4	43.4
0°-60°	2847.2	77.2
0°-90°	3687.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3687.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1270	1270	1270	1270	1270	
5°	1269	1266	1259	1268	1266	120
15°	1210	1211	1211	1227	1227	341
25°	1098	1104	1117	1145	1150	506
35°	945	959	991	1027	1037	592
45°	770	792	838	885	901	595
55°	583	613	674	727	742	522
65°	393	432	499	549	563	389
75°	205	250	311	316	312	215
85°	42	62	43	24	17	52
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1270.2	1270.2	1270.2	1270.2	1270.2
2.5°	1275.1	1271.0	1262.0	1271.0	1269.4
5°	1269.4	1266.1	1258.7	1267.7	1266.1
7.5°	1261.1	1257.9	1251.3	1262.0	1260.3
10°	1247.2	1245.5	1240.6	1252.9	1252.1
12.5°	1230.7	1229.9	1227.4	1241.4	1240.6
15°	1210.2	1211.0	1211.0	1227.4	1227.4
17.5°	1187.1	1188.8	1192.1	1210.2	1212.6
20°	1160.0	1163.3	1169.9	1190.4	1193.7
22.5°	1132.1	1134.5	1144.4	1169.1	1172.4
25°	1097.5	1104.1	1117.3	1145.2	1150.2
27.5°	1064.7	1070.4	1088.5	1117.3	1125.5
30°	1026.0	1035.1	1056.4	1087.7	1096.7
32.5°	989.0	998.9	1023.5	1059.7	1067.9
35°	944.6	959.4	990.7	1026.8	1036.7
37.5°	904.3	918.3	953.7	993.1	1004.6
40°	859.9	877.2	917.5	959.4	970.9
42.5°	818.8	835.3	878.9	921.6	937.2
45°	769.5	792.5	837.7	884.6	901.0
47.5°	724.3	747.3	799.1	849.3	864.1
50°	679.1	703.7	758.0	809.8	824.6
52.5°	632.2	658.5	716.9	768.7	786.0
55°	582.9	613.3	674.1	726.8	742.4
57.5°	536.0	567.3	632.2	685.7	701.3
60°	490.0	522.0	588.6	639.6	656.1
62.5°	439.0	476.8	545.9	596.0	608.4
65°	393.0	431.6	499.0	549.2	563.2
67.5°	344.5	386.4	453.8	499.9	513.0
70°	298.4	342.0	407.0	449.7	455.5
72.5°	249.1	293.5	359.3	386.4	386.4
75°	204.7	249.9	310.8	315.7	311.6
77.5°	156.2	206.4	245.8	235.9	226.1
80°	112.6	162.0	180.0	162.0	148.8
82.5°	75.6	117.6	108.5	86.3	76.5
85°	41.9	62.5	42.8	23.8	17.3
87.5°	15.6	14.0	4.1	4.1	4.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)