

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: P314206

Luminaire Tested: **24FCZ2-30-UNV-L83050-S-CP187-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: P314206
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-30-UNV-L83050-S-CP187-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.187" POLYCARB 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: 2726.0 lumens
Efficiency: N/A
Efficacy: 116.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

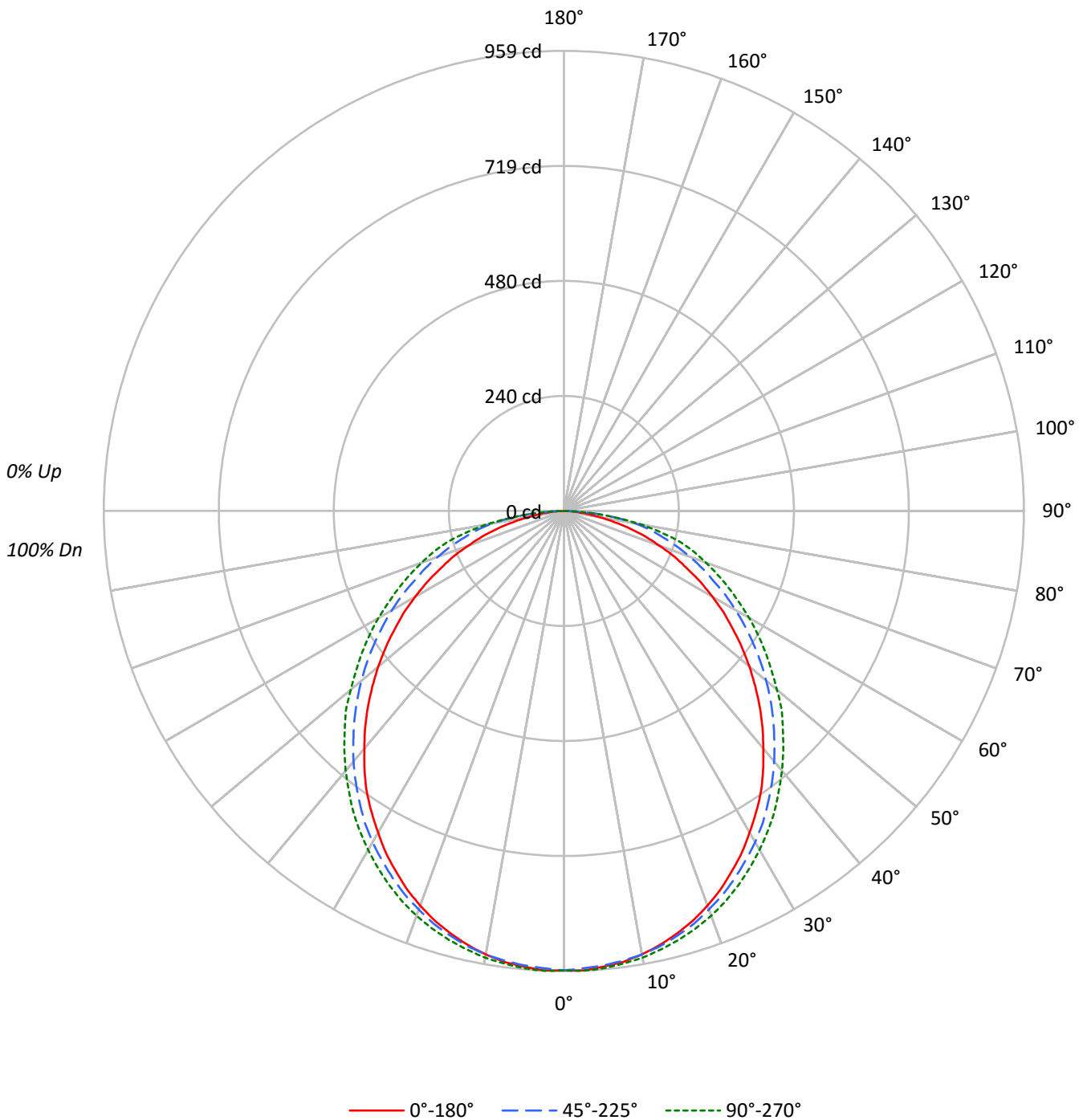
Input Watts (W): 23.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	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	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1289	1289	1289
5°	1288	1284	1292
10°	1282	1282	1292
15°	1270	1276	1289
20°	1253	1266	1286
25°	1230	1253	1278
30°	1203	1239	1267
35°	1176	1219	1257
40°	1136	1198	1242
45°	1099	1175	1229
50°	1057	1153	1214
55°	1009	1131	1202
60°	962	1114	1200
65°	901	1095	1208
70°	834	1100	1240
75°	747	1121	1310
80°	604	1188	1282
85°	454	1042	1016



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	90.7	3.3
10°-20°	259.1	9.5
20°-30°	389.4	14.3
30°-40°	463.9	17.0
40°-50°	474.7	17.4
50°-60°	427.4	15.7
60°-70°	335.7	12.3
70°-80°	217.8	8.0
80°-90°	67.4	2.5
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°	739.1	27.1
0°-40°	1203.0	44.1
0°-60°	2105.1	77.2
0°-90°	2726.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2726.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	958	958	958	958	958	
5°	953	955	951	956	957	91
15°	912	914	916	924	926	257
25°	829	836	844	858	861	382
35°	716	725	742	760	765	447
45°	578	591	617	641	646	445
55°	430	449	482	507	513	386
65°	283	305	344	372	379	282
75°	144	171	216	245	252	152
85°	29	55	68	66	66	36
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	957.7	957.7	957.7	957.7	957.7
2.5°	958.5	958.5	954.2	958.5	959.4
5°	953.3	955.1	950.7	955.9	956.8
7.5°	948.1	948.1	945.5	950.7	951.6
10°	938.6	939.5	938.6	944.7	945.5
12.5°	926.5	928.2	929.1	935.1	936.0
15°	911.8	914.4	916.1	923.9	925.6
17.5°	895.3	897.9	902.2	910.9	912.6
20°	875.4	878.9	884.1	895.3	897.9
22.5°	853.8	857.2	865.9	876.3	880.6
25°	828.6	835.6	844.2	858.1	860.7
27.5°	803.5	809.6	820.9	835.6	839.0
30°	774.1	783.6	797.5	812.2	815.7
32.5°	745.5	755.0	771.5	787.1	791.4
35°	716.1	724.7	742.1	760.2	765.4
37.5°	682.3	693.6	712.6	730.8	736.0
40°	646.8	660.7	682.3	701.4	707.4
42.5°	613.0	627.8	649.4	670.2	677.1
45°	577.5	591.4	617.4	640.8	645.9
47.5°	541.2	556.8	584.5	607.8	616.5
50°	504.8	521.3	550.7	574.9	580.1
52.5°	468.4	485.8	516.9	542.9	545.5
55°	430.3	449.4	482.3	507.4	512.6
57.5°	395.7	412.2	447.7	473.6	479.7
60°	357.6	375.8	413.9	438.1	445.9
62.5°	321.2	340.3	380.1	404.4	411.3
65°	283.1	304.8	343.8	372.3	379.3
67.5°	250.2	271.0	312.6	340.3	347.2
70°	212.1	235.5	279.7	308.3	315.2
72.5°	179.2	203.5	247.6	275.3	285.7
75°	143.7	171.4	215.6	245.0	252.0
77.5°	109.1	141.1	186.2	208.7	208.7
80°	77.9	111.7	153.3	163.7	165.4
82.5°	51.1	84.0	113.4	112.6	112.6
85°	29.4	54.6	67.5	65.8	65.8
87.5°	11.3	22.5	24.2	24.2	23.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)