

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: P313822

Luminaire Tested: **24FCZ2-30-UNV-L83050-CA125-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: P313822
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-15)
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-CA125-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" 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: 2901.0 lumens
Efficiency: N/A
Efficacy: 121.4 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

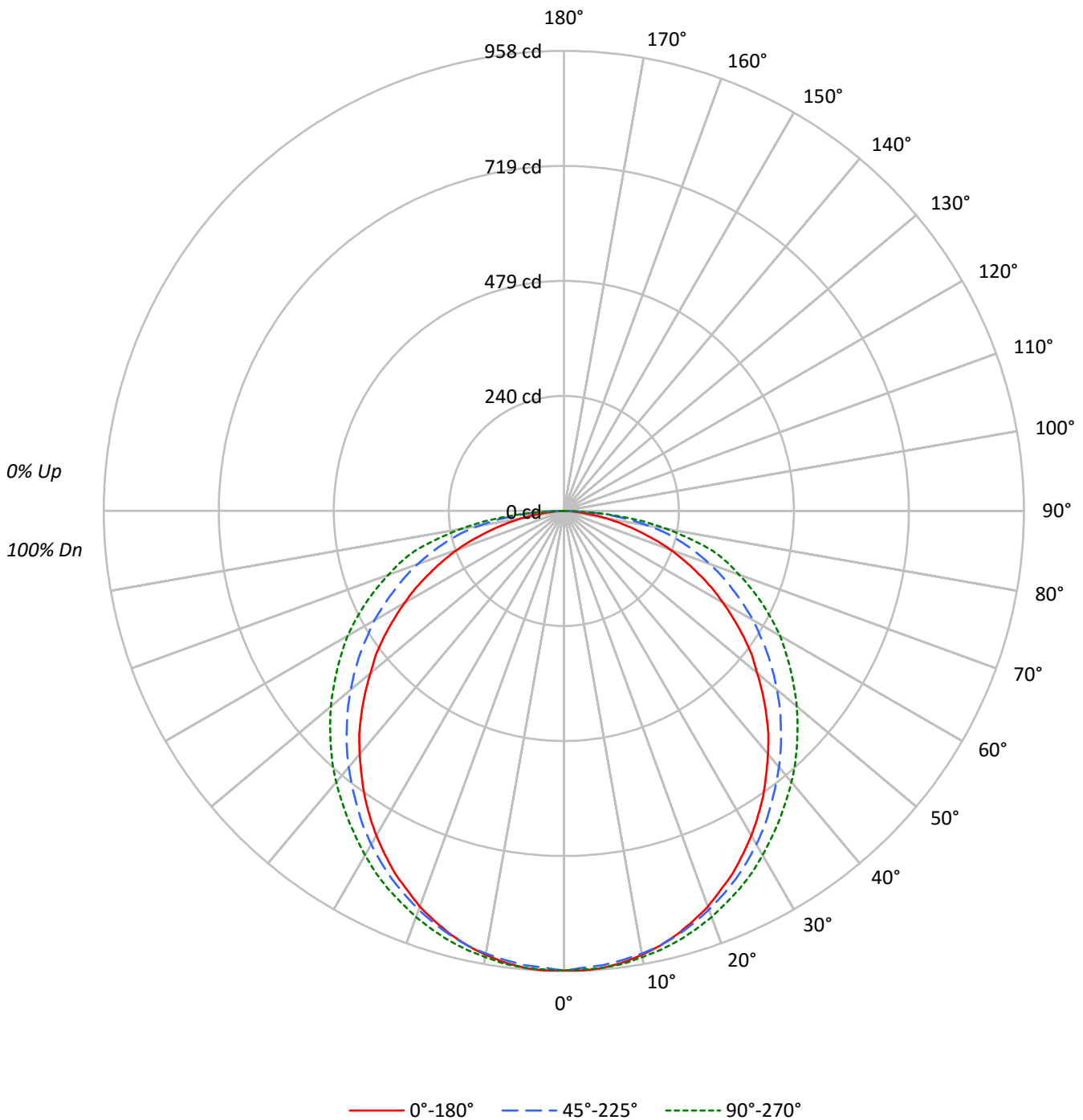
Input Watts (W): 23.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	108	103	98	94	105	100	96	92	96	92	89	92	89	87	88	86	84	82
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	79	67	58	52	64	57	51	62	56	50	60	54	50	47
5	74	61	52	45	72	60	51	44	58	50	44	56	49	43	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	64	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	37	31	57	45	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1287	1287	1287
5°	1290	1282	1290
10°	1282	1278	1289
15°	1271	1274	1290
20°	1255	1265	1289
25°	1236	1256	1287
30°	1213	1246	1286
35°	1189	1233	1287
40°	1161	1224	1295
45°	1134	1216	1306
50°	1100	1213	1326
55°	1072	1215	1352
60°	1031	1225	1399
65°	984	1238	1450
70°	932	1276	1530
75°	831	1331	1671
80°	708	1409	1708
85°	505	1397	1635



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	90.5	3.1
10°-20°	258.9	8.9
20°-30°	391.0	13.5
30°-40°	471.3	16.2
40°-50°	494.8	17.1
50°-60°	462.9	16.0
60°-70°	382.3	13.2
70°-80°	260.5	9.0
80°-90°	88.8	3.1
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°	740.5	25.5
0°-40°	1211.8	41.8
0°-60°	2169.4	74.8
0°-90°	2901.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2901.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	957	957	957	957	957	
5°	955	954	949	955	955	91
15°	912	913	914	924	926	257
25°	833	836	846	862	867	383
35°	724	732	751	776	784	452
45°	596	608	639	674	686	459
55°	457	476	518	560	576	408
65°	309	335	389	438	455	306
75°	160	196	256	304	322	170
85°	33	64	90	102	106	41
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	956.7	956.7	956.7	956.7	956.7
2.5°	957.7	956.7	951.9	956.7	955.8
5°	954.8	953.8	949.0	954.8	954.8
7.5°	948.1	948.1	943.2	950.0	950.9
10°	938.4	938.4	935.5	943.2	943.2
12.5°	926.9	926.9	926.9	934.6	935.5
15°	912.4	913.4	914.4	924.0	925.9
17.5°	895.1	897.0	899.9	911.5	913.4
20°	876.8	878.8	883.6	897.0	899.9
22.5°	853.7	858.5	865.3	880.7	883.6
25°	832.6	836.4	846.0	862.4	867.2
27.5°	806.6	812.3	824.9	842.2	848.9
30°	780.6	786.4	801.8	822.0	827.7
32.5°	752.7	761.3	777.7	798.9	805.6
35°	723.8	731.5	750.7	775.8	783.5
37.5°	692.0	702.6	723.8	750.7	760.4
40°	661.2	672.8	696.8	725.7	737.3
42.5°	630.4	642.0	668.9	701.7	713.2
45°	595.8	608.3	639.1	673.7	686.3
47.5°	561.1	576.5	610.2	646.8	660.3
50°	525.5	542.8	579.4	617.9	633.3
52.5°	493.8	510.1	548.6	590.0	604.4
55°	457.2	475.5	517.8	560.2	576.5
57.5°	419.6	439.9	485.1	531.3	547.7
60°	383.1	405.2	455.3	501.5	519.7
62.5°	347.5	369.6	421.6	469.7	488.0
65°	309.0	334.9	388.8	437.9	455.3
67.5°	272.4	300.3	357.1	405.2	422.5
70°	236.8	263.7	324.4	371.5	388.8
72.5°	198.3	229.1	289.7	338.8	357.1
75°	159.8	196.3	256.0	304.1	321.5
77.5°	124.2	161.7	221.4	260.8	269.5
80°	91.4	129.9	181.9	209.8	220.4
82.5°	58.7	97.2	138.6	158.8	167.5
85°	32.7	64.5	90.5	102.0	105.9
87.5°	13.5	27.9	36.6	41.4	41.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)