

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: P314200

Luminaire Tested: **24FCZ2-30-UNV-L83050-S-CP125-W2A-U-3000K**

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: P314200
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-CP125-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB SHEET
Light Source: (168) 3000K 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: 2690.0 lumens
Efficiency: N/A
Efficacy: 115.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.27 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

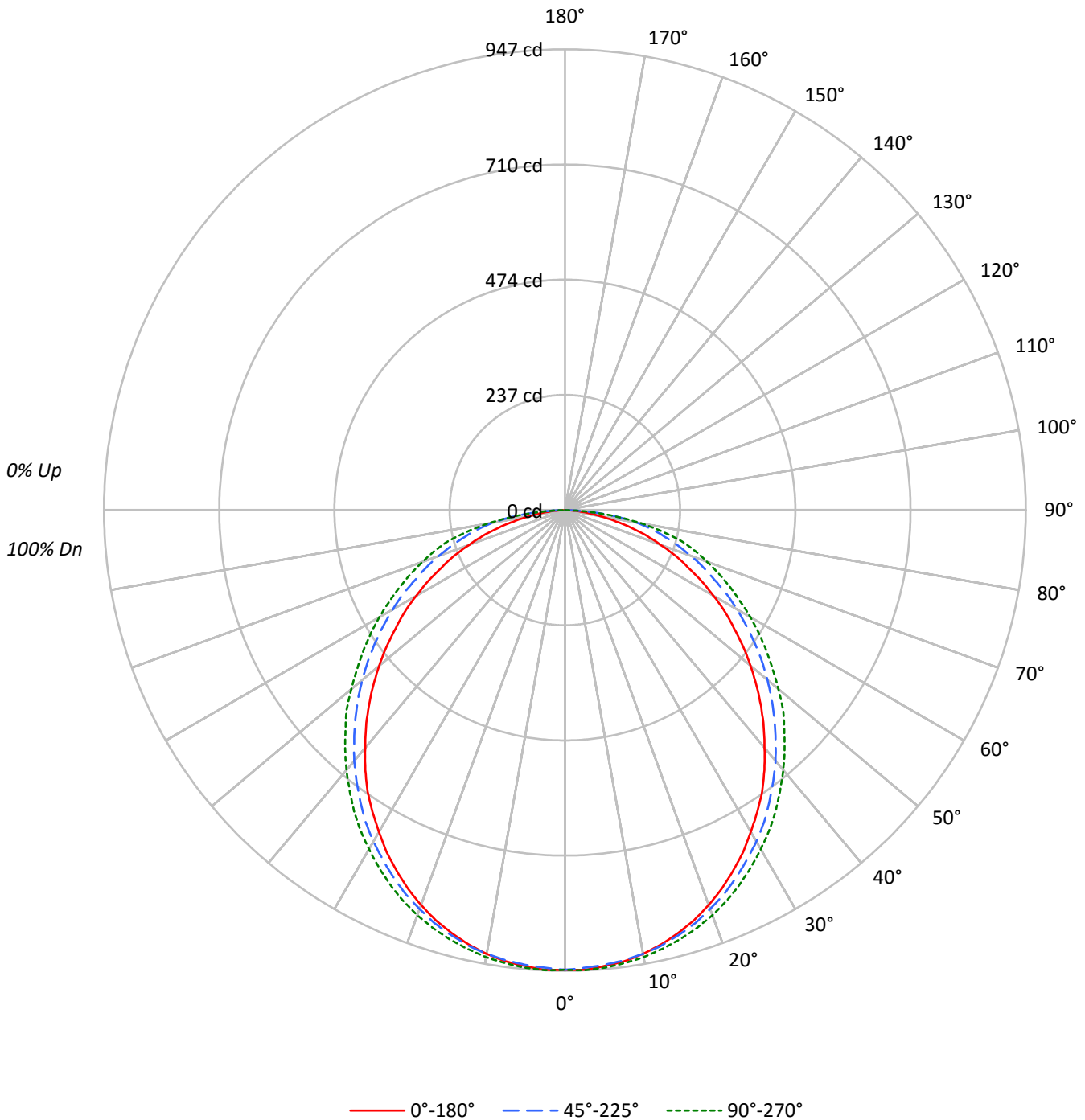
Input Watts (W): 23.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1271	1271	1271
5°	1271	1267	1275
10°	1265	1265	1275
15°	1253	1259	1272
20°	1237	1249	1269
25°	1214	1237	1261
30°	1187	1223	1251
35°	1161	1203	1241
40°	1121	1183	1226
45°	1084	1159	1213
50°	1043	1137	1198
55°	996	1116	1187
60°	950	1099	1184
65°	890	1080	1191
70°	823	1086	1223
75°	737	1106	1292
80°	596	1172	1265
85°	449	1028	1002



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	89.5	3.3
10°-20°	255.6	9.5
20°-30°	384.3	14.3
30°-40°	457.7	17.0
40°-50°	468.5	17.4
50°-60°	421.8	15.7
60°-70°	331.2	12.3
70°-80°	215.0	8.0
80°-90°	66.5	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°	729.4	27.1
0°-40°	1187.1	44.1
0°-60°	2077.3	77.2
0°-90°	2690.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2690.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	945	945	945	945	945	
5°	941	942	938	943	944	89
15°	900	902	904	912	913	254
25°	818	824	833	847	849	377
35°	707	715	732	750	755	441
45°	570	584	609	632	637	439
55°	425	444	476	501	506	381
65°	279	301	339	367	374	278
75°	142	169	213	242	249	150
85°	29	54	67	65	65	35
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	945.0	945.0	945.0	945.0	945.0
2.5°	945.9	945.9	941.6	945.9	946.7
5°	940.7	942.5	938.2	943.3	944.2
7.5°	935.6	935.6	933.1	938.2	939.0
10°	926.2	927.1	926.2	932.2	933.1
12.5°	914.3	916.0	916.8	922.8	923.7
15°	899.7	902.3	904.0	911.7	913.4
17.5°	883.5	886.1	890.3	898.9	900.6
20°	863.8	867.3	872.4	883.5	886.1
22.5°	842.5	845.9	854.4	864.7	869.0
25°	817.7	824.5	833.1	846.8	849.3
27.5°	792.9	798.9	810.0	824.5	828.0
30°	763.9	773.3	786.9	801.5	804.9
32.5°	735.7	745.1	761.3	776.7	781.0
35°	706.6	715.2	732.3	750.2	755.3
37.5°	673.3	684.4	703.2	721.2	726.3
40°	638.3	651.9	673.3	692.1	698.1
42.5°	604.9	619.5	640.8	661.3	668.2
45°	569.9	583.6	609.2	632.3	637.4
47.5°	534.0	549.4	576.7	599.8	608.4
50°	498.1	514.4	543.4	567.4	572.5
52.5°	462.3	479.3	510.1	535.7	538.3
55°	424.7	443.5	475.9	500.7	505.8
57.5°	390.5	406.7	441.7	467.4	473.4
60°	352.9	370.8	408.4	432.3	440.0
62.5°	317.0	335.8	375.1	399.0	405.9
65°	279.4	300.8	339.2	367.4	374.2
67.5°	246.9	267.4	308.5	335.8	342.6
70°	209.3	232.4	276.0	304.2	311.0
72.5°	176.9	200.8	244.4	271.7	282.0
75°	141.8	169.2	212.8	241.8	248.6
77.5°	107.7	139.3	183.7	205.9	205.9
80°	76.9	110.2	151.2	161.5	163.2
82.5°	50.4	82.9	111.9	111.1	111.1
85°	29.1	53.8	66.6	64.9	64.9
87.5°	11.1	22.2	23.9	23.9	23.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)