

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: P311252

Luminaire Tested: **24FCZ2-30-UNV-L82765-S-CP250-W2A-U-5500K**

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: P311252
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-L82765-S-CP250-W2A-U-5500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.250" POLYCARB SHEET
Light Source: (168) 5500K 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: 2812.0 lumens
Efficiency: N/A
Efficacy: 116.7 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

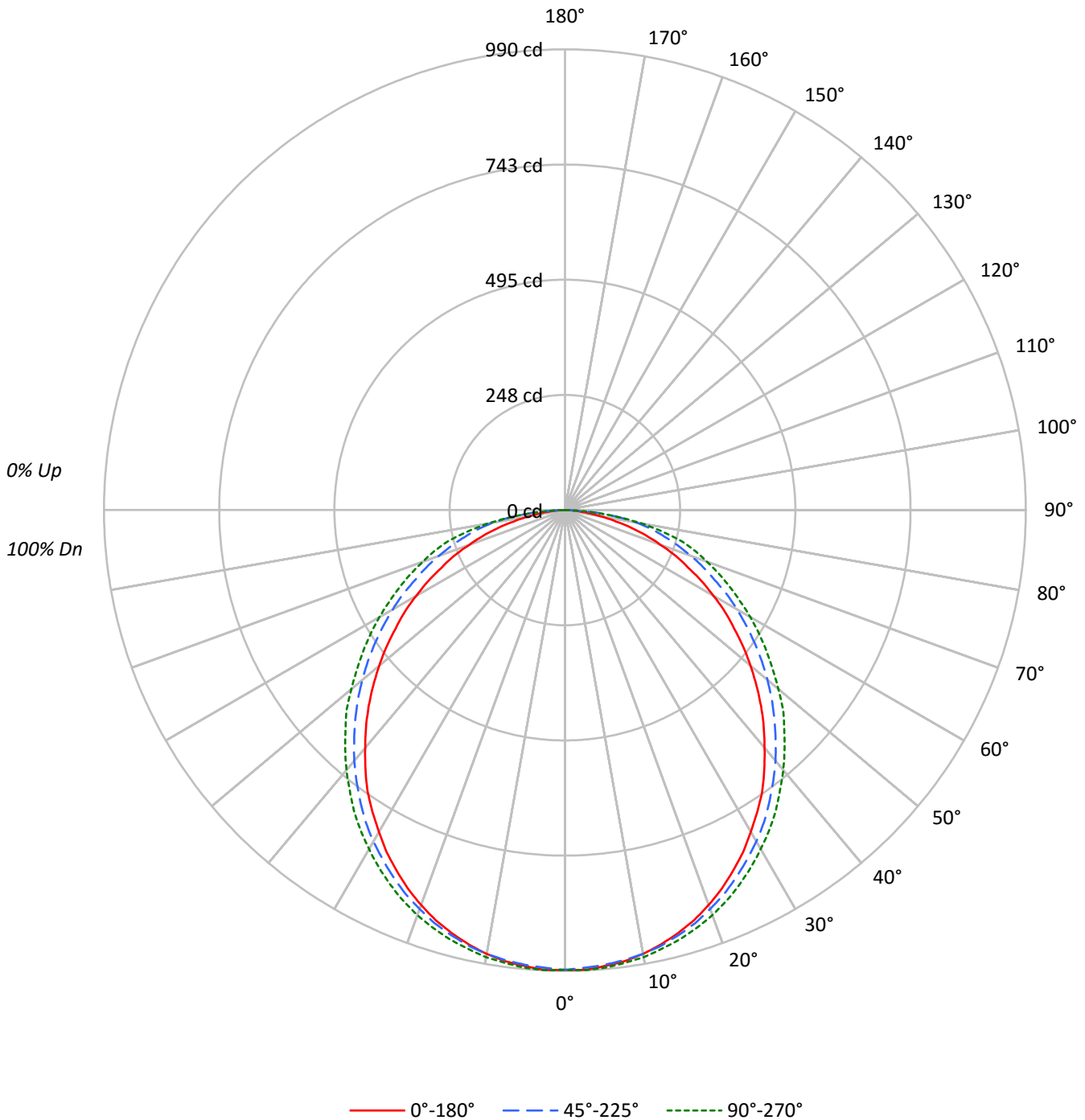
Input Watts (W): 24.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1329	1329	1329
5°	1328	1325	1333
10°	1323	1323	1333
15°	1310	1316	1330
20°	1293	1306	1326
25°	1269	1293	1318
30°	1241	1278	1307
35°	1213	1257	1297
40°	1172	1236	1282
45°	1134	1212	1268
50°	1090	1189	1253
55°	1041	1167	1240
60°	993	1149	1238
65°	930	1129	1245
70°	861	1135	1279
75°	771	1156	1351
80°	623	1225	1322
85°	469	1076	1048



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	93.5	3.3
10°-20°	267.2	9.5
20°-30°	401.7	14.3
30°-40°	478.5	17.0
40°-50°	489.7	17.4
50°-60°	440.9	15.7
60°-70°	346.2	12.3
70°-80°	224.7	8.0
80°-90°	69.5	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°	762.4	27.1
0°-40°	1240.9	44.1
0°-60°	2171.5	77.2
0°-90°	2812.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2812.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	988	988	988	988	988	
5°	983	985	981	986	987	93
15°	940	943	945	953	955	265
25°	855	862	871	885	888	394
35°	739	748	766	784	790	461
45°	596	610	637	661	666	459
55°	444	464	498	523	529	398
65°	292	314	355	384	391	291
75°	148	177	222	253	260	157
85°	30	56	70	68	68	37
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	987.9	987.9	987.9	987.9	987.9
2.5°	988.8	988.8	984.3	988.8	989.7
5°	983.4	985.2	980.7	986.1	987.0
7.5°	978.0	978.0	975.4	980.7	981.6
10°	968.2	969.1	968.2	974.5	975.4
12.5°	955.7	957.5	958.4	964.7	965.5
15°	940.5	943.2	945.0	953.0	954.8
17.5°	923.6	926.2	930.7	939.6	941.4
20°	903.0	906.6	912.0	923.6	926.2
22.5°	880.7	884.3	893.2	903.9	908.4
25°	854.8	861.9	870.9	885.2	887.8
27.5°	828.9	835.1	846.7	861.9	865.5
30°	798.5	808.3	822.6	837.8	841.4
32.5°	769.0	778.9	795.8	811.9	816.4
35°	738.7	747.6	765.5	784.2	789.6
37.5°	703.8	715.4	735.1	753.9	759.2
40°	667.2	681.5	703.8	723.5	729.7
42.5°	632.4	647.6	669.9	691.3	698.5
45°	595.8	610.1	636.8	661.0	666.3
47.5°	558.2	574.3	602.9	627.0	636.0
50°	520.7	537.7	568.1	593.1	598.4
52.5°	483.2	501.1	533.2	560.0	562.7
55°	443.9	463.6	497.5	523.4	528.8
57.5°	408.2	425.2	461.8	488.6	494.8
60°	368.9	387.6	426.9	452.0	460.0
62.5°	331.4	351.0	392.1	417.1	424.3
65°	292.1	314.4	354.6	384.1	391.2
67.5°	258.1	279.6	322.4	351.0	358.2
70°	218.8	242.9	288.5	318.0	325.1
72.5°	184.9	209.9	255.5	284.0	294.8
75°	148.3	176.9	222.4	252.8	259.9
77.5°	112.5	145.6	192.0	215.3	215.3
80°	80.4	115.2	158.1	168.8	170.6
82.5°	52.7	86.6	117.0	116.1	116.1
85°	30.4	56.3	69.7	67.9	67.9
87.5°	11.6	23.2	25.0	25.0	24.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)