

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: P313836

Luminaire Tested: **24FCZ2-30-UNV-L83050-CP250-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: P313836
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-CP250-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.250" 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: 2574.0 lumens
Efficiency: N/A
Efficacy: 110.0 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

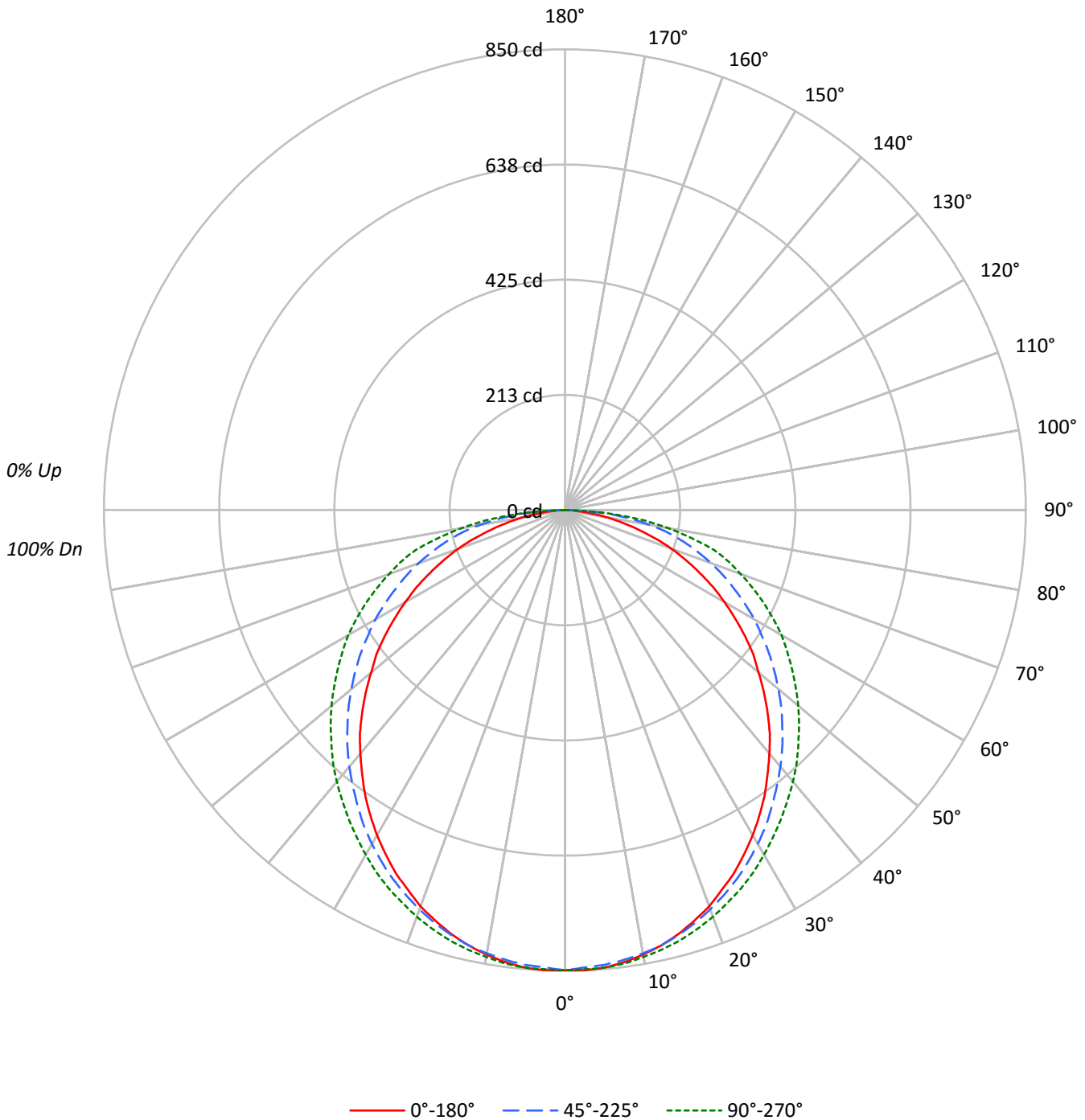
Input Watts (W): 23.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1142	1142	1142
5°	1144	1137	1144
10°	1138	1134	1143
15°	1128	1130	1144
20°	1114	1123	1143
25°	1097	1114	1142
30°	1076	1105	1141
35°	1055	1094	1142
40°	1030	1086	1149
45°	1006	1079	1159
50°	976	1076	1176
55°	952	1078	1200
60°	915	1087	1241
65°	873	1098	1286
70°	827	1132	1357
75°	737	1181	1483
80°	628	1251	1516
85°	448	1240	1450



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	80.3	3.1
10°-20°	229.7	8.9
20°-30°	347.0	13.5
30°-40°	418.2	16.2
40°-50°	439.0	17.1
50°-60°	410.7	16.0
60°-70°	339.2	13.2
70°-80°	231.1	9.0
80°-90°	78.8	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°	657.0	25.5
0°-40°	1075.2	41.8
0°-60°	1924.9	74.8
0°-90°	2574.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2574.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	849	849	849	849	849	
5°	847	846	842	847	847	80
15°	810	810	811	820	822	228
25°	739	742	751	765	770	340
35°	642	649	666	688	695	401
45°	529	540	567	598	609	408
55°	406	422	460	497	512	362
65°	274	297	345	389	404	272
75°	142	174	227	270	285	151
85°	29	57	80	90	94	36
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	848.9	848.9	848.9	848.9	848.9
2.5°	849.7	848.9	844.6	848.9	848.0
5°	847.2	846.3	842.1	847.2	847.2
7.5°	841.2	841.2	836.9	842.9	843.8
10°	832.7	832.7	830.1	836.9	836.9
12.5°	822.4	822.4	822.4	829.2	830.1
15°	809.6	810.5	811.3	819.8	821.6
17.5°	794.2	795.9	798.5	808.7	810.5
20°	778.0	779.7	784.0	795.9	798.5
22.5°	757.5	761.8	767.8	781.4	784.0
25°	738.7	742.1	750.7	765.2	769.5
27.5°	715.7	720.8	731.9	747.3	753.2
30°	692.6	697.7	711.4	729.3	734.4
32.5°	667.8	675.5	690.0	708.8	714.8
35°	642.2	649.0	666.1	688.3	695.2
37.5°	614.0	623.4	642.2	666.1	674.7
40°	586.7	597.0	618.3	643.9	654.2
42.5°	559.4	569.6	593.5	622.6	632.8
45°	528.6	539.7	567.1	597.8	608.9
47.5°	497.9	511.6	541.4	573.9	585.8
50°	466.3	481.7	514.1	548.3	561.9
52.5°	438.1	452.6	486.8	523.5	536.3
55°	405.7	421.9	459.5	497.0	511.6
57.5°	372.3	390.3	430.4	471.4	485.9
60°	339.9	359.5	403.9	444.9	461.2
62.5°	308.3	327.9	374.1	416.8	433.0
65°	274.1	297.2	345.0	388.6	403.9
67.5°	241.7	266.5	316.8	359.5	374.9
70°	210.1	234.0	287.8	329.6	345.0
72.5°	175.9	203.3	257.1	300.6	316.8
75°	141.8	174.2	227.2	269.9	285.2
77.5°	110.2	143.5	196.4	231.4	239.1
80°	81.1	115.3	161.4	186.2	195.6
82.5°	52.1	86.3	123.0	140.9	148.6
85°	29.0	57.2	80.3	90.5	93.9
87.5°	12.0	24.8	32.5	36.7	36.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)