

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: P313816

Luminaire Tested: **24FCZ2-30-UNV-L83050-CA08-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: P313816
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-CA08-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.08" ACRYLIC 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: 2773.0 lumens
Efficiency: N/A
Efficacy: 118.5 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

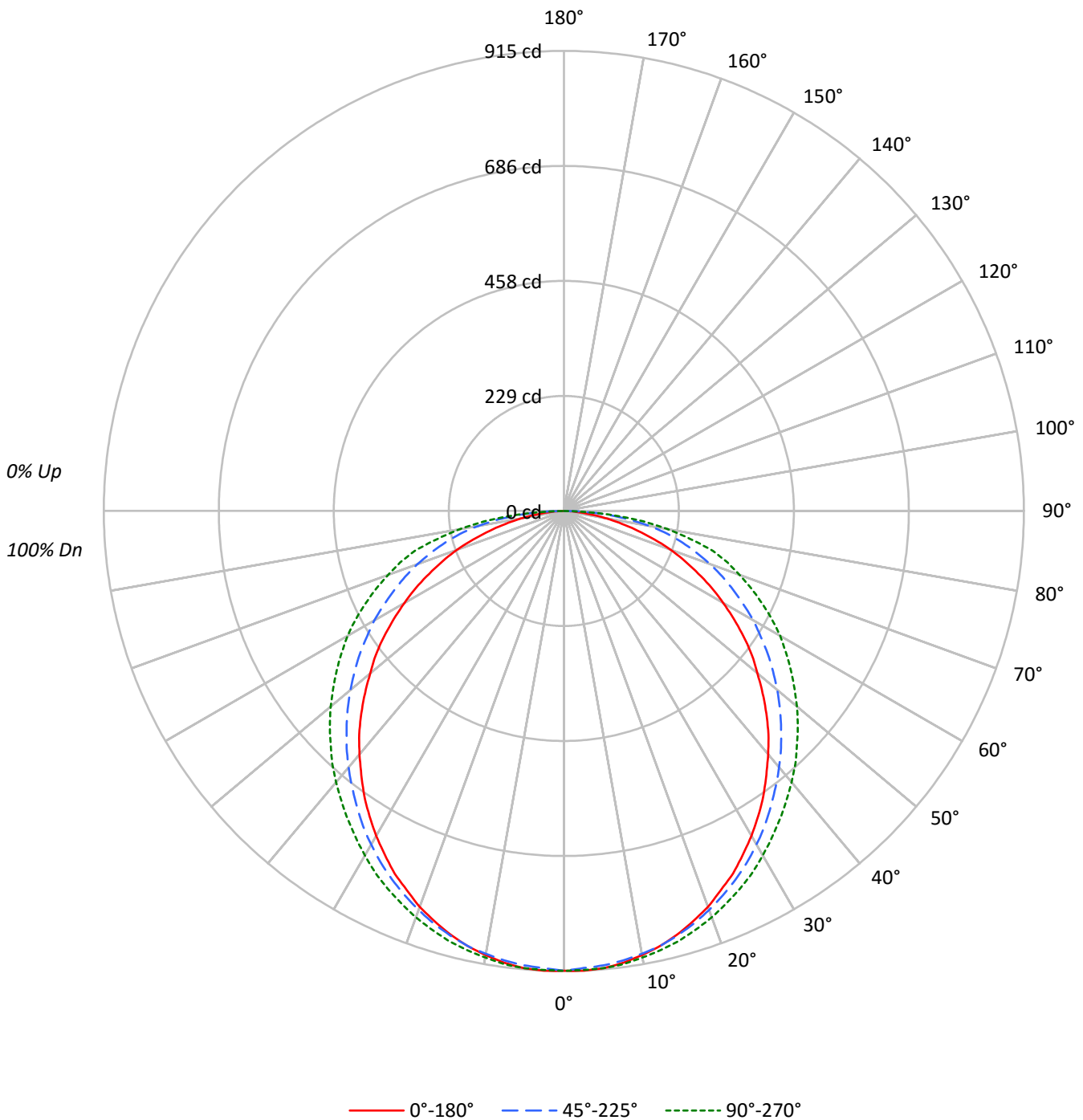
Input Watts (W): 23.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1230	1230	1230
5°	1233	1225	1233
10°	1226	1222	1232
15°	1215	1217	1233
20°	1200	1209	1232
25°	1181	1201	1231
30°	1159	1191	1229
35°	1136	1179	1230
40°	1110	1170	1238
45°	1084	1162	1248
50°	1051	1159	1267
55°	1025	1161	1293
60°	985	1171	1337
65°	940	1183	1386
70°	890	1220	1462
75°	794	1272	1598
80°	677	1347	1633
85°	483	1335	1562



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	86.5	3.1
10°-20°	247.5	8.9
20°-30°	373.8	13.5
30°-40°	450.5	16.2
40°-50°	472.9	17.1
50°-60°	442.5	16.0
60°-70°	365.4	13.2
70°-80°	249.0	9.0
80°-90°	84.9	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°	707.8	25.5
0°-40°	1158.3	41.8
0°-60°	2073.7	74.8
0°-90°	2773.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2773.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	914	914	914	914	914	
5°	913	912	907	913	913	87
15°	872	873	874	883	885	246
25°	796	800	809	824	829	366
35°	692	699	718	742	749	432
45°	570	582	611	644	656	439
55°	437	454	495	536	551	390
65°	295	320	372	419	435	293
75°	153	188	245	291	307	163
85°	31	62	86	98	101	39
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	914.5	914.5	914.5	914.5	914.5
2.5°	915.4	914.5	909.9	914.5	913.6
5°	912.7	911.8	907.2	912.7	912.7
7.5°	906.2	906.2	901.6	908.1	909.0
10°	897.0	897.0	894.3	901.6	901.6
12.5°	886.0	886.0	886.0	893.4	894.3
15°	872.2	873.1	874.0	883.2	885.1
17.5°	855.6	857.5	860.2	871.3	873.1
20°	838.1	840.0	844.6	857.5	860.2
22.5°	816.1	820.7	827.1	841.8	844.6
25°	795.8	799.5	808.7	824.3	828.9
27.5°	771.0	776.5	788.5	805.0	811.5
30°	746.1	751.7	766.4	785.7	791.2
32.5°	719.5	727.7	743.4	763.6	770.1
35°	691.9	699.2	717.6	741.5	748.9
37.5°	661.5	671.6	691.9	717.6	726.8
40°	632.1	643.1	666.1	693.7	704.7
42.5°	602.6	613.7	639.4	670.7	681.7
45°	569.5	581.5	610.9	644.0	656.0
47.5°	536.4	551.1	583.3	618.3	631.1
50°	502.3	518.9	553.9	590.7	605.4
52.5°	472.0	487.6	524.4	564.0	577.8
55°	437.0	454.5	495.0	535.5	551.1
57.5°	401.1	420.5	463.7	507.9	523.5
60°	366.2	387.3	435.2	479.3	496.8
62.5°	332.1	353.3	403.0	449.0	466.5
65°	295.3	320.2	371.7	418.6	435.2
67.5°	260.4	287.0	341.3	387.3	403.9
70°	226.3	252.1	310.1	355.1	371.7
72.5°	189.5	219.0	276.9	323.9	341.3
75°	152.7	187.7	244.7	290.7	307.3
77.5°	118.7	154.6	211.6	249.3	257.6
80°	87.4	124.2	173.9	200.6	210.7
82.5°	56.1	92.9	132.5	151.8	160.1
85°	31.3	61.6	86.5	97.5	101.2
87.5°	12.9	26.7	35.0	39.6	39.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)