

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: P313640

Luminaire Tested: **24FCZ2-50-UNV-L83050-RDP-CA08-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: P313640
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-50-UNV-L83050-RDP-CA08-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" ACRYLIC 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: 2907.0 lumens
Efficiency: N/A
Efficacy: 68.2 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

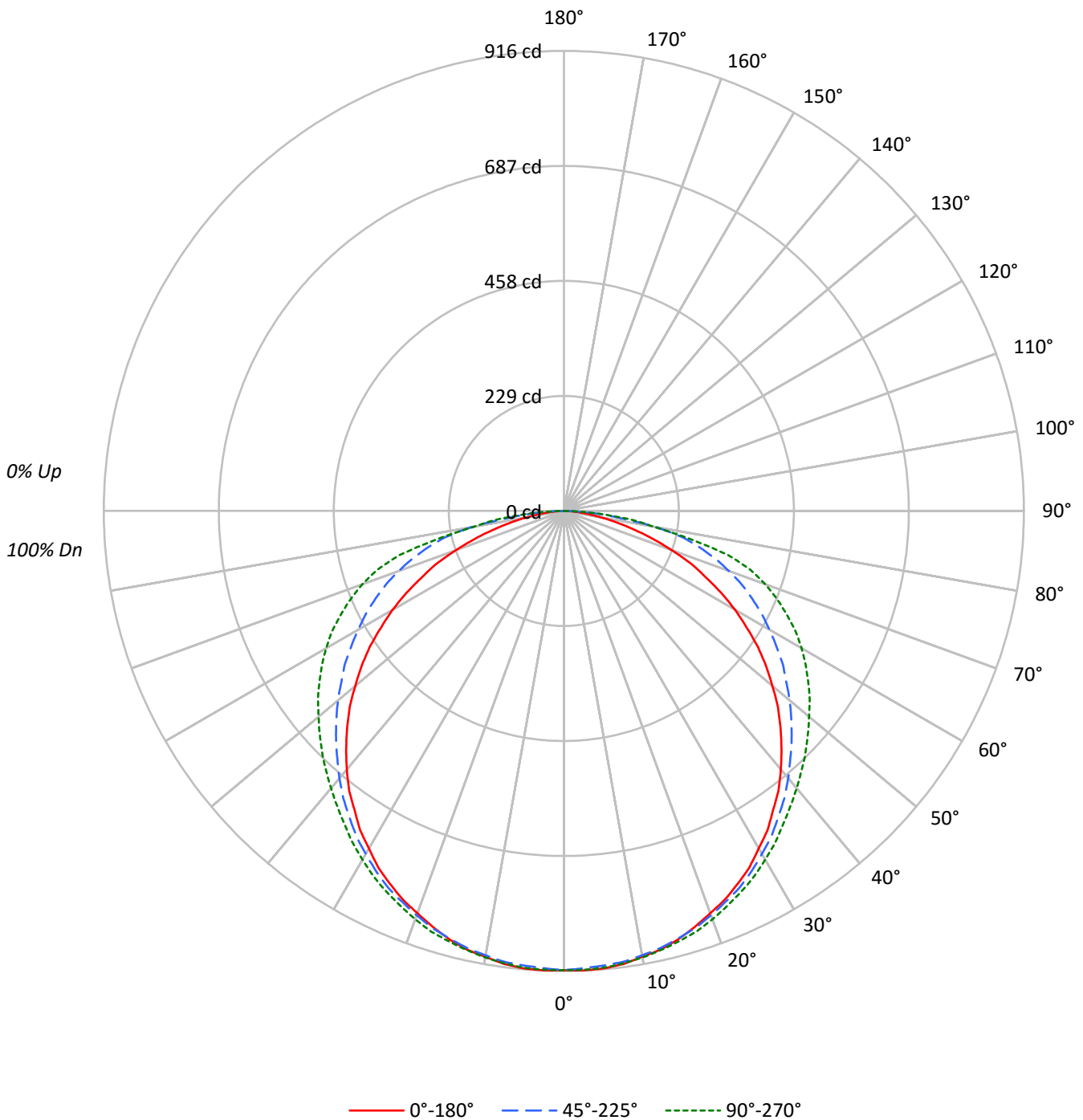
Input Watts (W): 42.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	93	89	92	89	87	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1230	1230	1230
5°	1235	1227	1233
10°	1231	1227	1233
15°	1229	1227	1235
20°	1220	1226	1239
25°	1216	1229	1242
30°	1205	1225	1246
35°	1194	1222	1250
40°	1180	1221	1266
45°	1161	1221	1295
50°	1135	1229	1334
55°	1106	1248	1394
60°	1059	1273	1471
65°	992	1317	1561
70°	902	1378	1679
75°	765	1454	1754
80°	604	1464	1419
85°	445	1113	1246



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	86.7	3.0
10°-20°	249.6	8.6
20°-30°	381.7	13.1
30°-40°	466.6	16.0
40°-50°	497.3	17.1
50°-60°	475.5	16.4
60°-70°	402.8	13.9
70°-80°	270.7	9.3
80°-90°	76.4	2.6
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°	717.9	24.7
0°-40°	1184.5	40.7
0°-60°	2157.2	74.2
0°-90°	2907.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2907.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	914	914	914	914	914	
5°	914	913	908	913	913	87
15°	882	882	881	888	887	249
25°	819	822	828	835	836	377
35°	727	732	744	758	761	455
45°	610	620	642	669	681	470
55°	472	489	532	574	594	420
65°	312	343	414	469	490	309
75°	147	200	280	327	337	157
85°	29	59	72	78	81	36
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	914.2	914.2	914.2	914.2	914.2
2.5°	915.6	915.6	911.3	914.2	914.2
5°	914.2	912.7	908.4	912.7	912.7
7.5°	909.8	908.4	905.5	909.8	908.4
10°	901.2	901.2	898.3	902.6	902.6
12.5°	894.0	892.5	891.1	896.9	895.4
15°	882.4	882.4	881.0	888.2	886.8
17.5°	868.0	869.5	870.9	876.7	878.1
20°	852.2	855.1	856.5	865.1	865.1
22.5°	837.7	839.2	842.1	850.7	850.7
25°	819.0	821.9	827.7	834.9	836.3
27.5°	800.3	801.7	808.9	819.0	820.4
30°	775.7	780.1	788.7	800.3	801.7
32.5°	754.1	758.4	768.5	780.1	783.0
35°	726.7	732.5	744.0	758.4	761.3
37.5°	702.2	706.5	721.0	736.8	741.1
40°	671.9	680.6	695.0	713.7	721.0
42.5°	641.6	650.3	667.6	692.1	700.8
45°	609.9	620.0	641.6	669.0	680.6
47.5°	578.2	589.7	614.3	646.0	659.0
50°	542.2	556.6	586.9	622.9	637.3
52.5°	507.6	524.9	558.0	598.4	617.1
55°	471.5	488.8	532.1	573.9	594.1
57.5°	431.1	454.2	501.8	549.4	571.0
60°	393.6	415.3	472.9	524.9	546.5
62.5°	353.3	382.1	444.1	498.9	520.5
65°	311.5	343.2	413.8	468.6	490.2
67.5°	274.0	308.6	383.5	438.3	460.0
70°	229.3	272.5	350.4	405.2	426.8
72.5°	187.4	235.0	315.8	369.1	389.3
75°	147.1	200.4	279.7	327.3	337.4
77.5°	109.6	165.8	242.2	262.4	255.2
80°	77.9	132.7	188.9	178.8	183.1
82.5°	50.5	100.9	116.8	132.7	137.0
85°	28.8	59.1	72.1	77.9	80.7
87.5°	13.0	21.6	28.8	28.8	27.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)