

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: P313621

Luminaire Tested: **24FCZ2-50HE-UNV-L83050-RDP-CA125-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: P313621
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: 24FCZ2-50HE-UNV-L83050-RDP-CA125-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" ACRYLIC SHEET
Light Source: (336) 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: 3080.0 lumens
Efficiency: N/A
Efficacy: 80.2 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

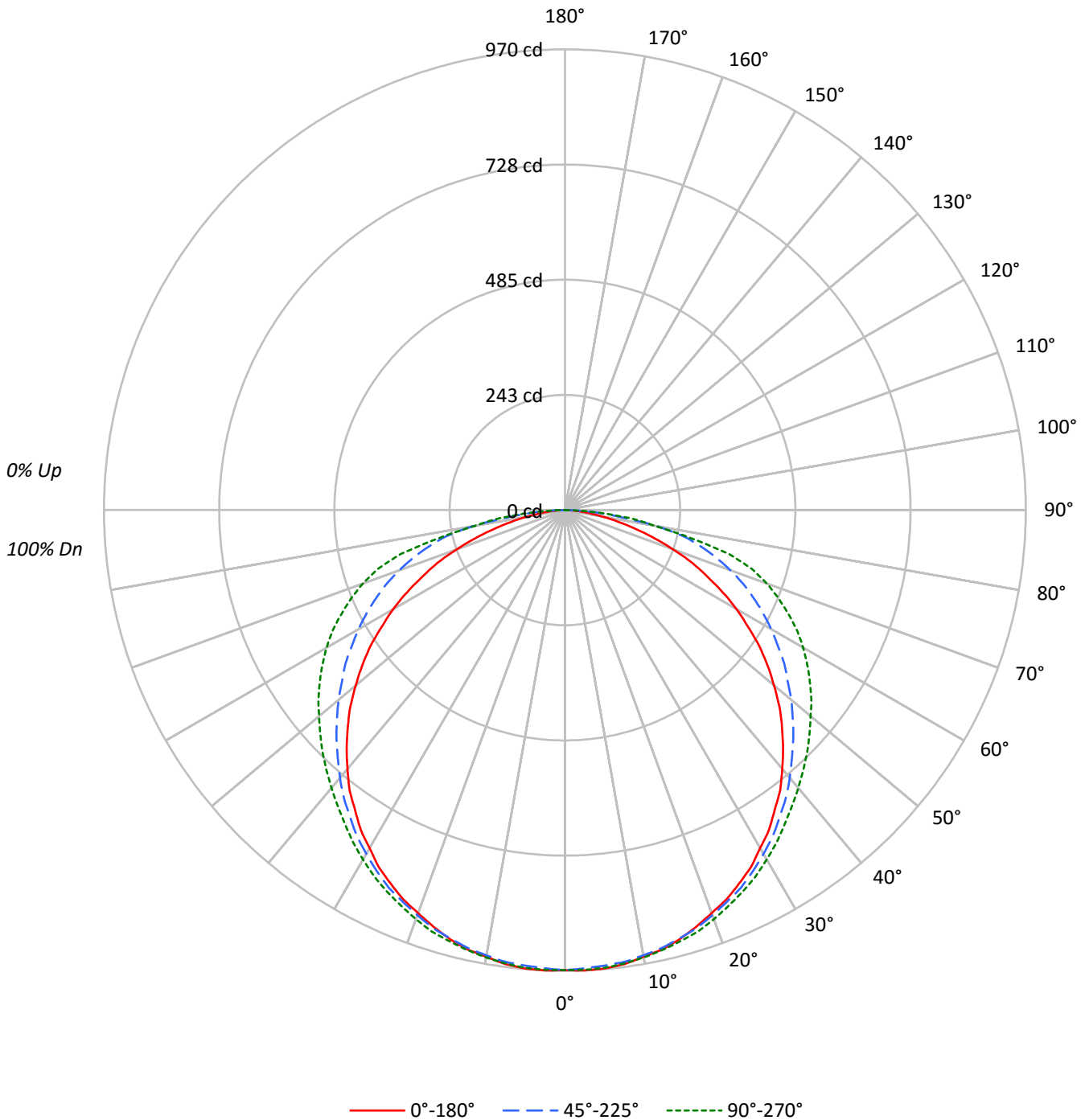
Input Watts (W): 38.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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	68	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°	1303	1303	1303
5°	1308	1300	1306
10°	1304	1300	1307
15°	1302	1300	1309
20°	1293	1299	1312
25°	1288	1302	1315
30°	1277	1298	1320
35°	1265	1295	1325
40°	1250	1293	1342
45°	1230	1294	1372
50°	1202	1302	1414
55°	1172	1322	1476
60°	1122	1348	1558
65°	1051	1396	1654
70°	956	1460	1779
75°	810	1541	1858
80°	639	1550	1503
85°	472	1179	1321



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	91.9	3.0
10°-20°	264.4	8.6
20°-30°	404.4	13.1
30°-40°	494.3	16.0
40°-50°	526.8	17.1
50°-60°	503.7	16.4
60°-70°	426.7	13.9
70°-80°	286.8	9.3
80°-90°	80.9	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°	760.7	24.7
0°-40°	1255.0	40.7
0°-60°	2285.6	74.2
0°-90°	3080.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3080.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	969	969	969	969	969	
5°	969	967	962	967	967	92
15°	935	935	933	941	940	264
25°	868	871	877	884	886	400
35°	770	776	788	804	807	482
45°	646	657	680	709	721	498
55°	500	518	564	608	629	445
65°	330	364	438	496	519	328
75°	156	212	296	347	358	167
85°	31	63	76	82	86	38
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	968.6	968.6	968.6	968.6	968.6
2.5°	970.1	970.1	965.5	968.6	968.6
5°	968.6	967.0	962.5	967.0	967.0
7.5°	964.0	962.5	959.4	964.0	962.5
10°	954.8	954.8	951.8	956.4	956.4
12.5°	947.2	945.7	944.1	950.2	948.7
15°	935.0	935.0	933.4	941.1	939.5
17.5°	919.7	921.2	922.7	928.9	930.4
20°	902.9	905.9	907.5	916.6	916.6
22.5°	887.6	889.1	892.2	901.4	901.4
25°	867.7	870.8	876.9	884.5	886.1
27.5°	847.9	849.4	857.0	867.7	869.3
30°	821.9	826.5	835.7	847.9	849.4
32.5°	799.0	803.6	814.3	826.5	829.5
35°	770.0	776.1	788.3	803.6	806.6
37.5°	744.0	748.6	763.9	780.7	785.2
40°	711.9	721.1	736.4	756.2	763.9
42.5°	679.8	689.0	707.3	733.3	742.5
45°	646.2	656.9	679.8	708.9	721.1
47.5°	612.6	624.8	650.8	684.4	698.2
50°	574.4	589.7	621.8	660.0	675.3
52.5°	537.8	556.1	591.2	634.0	653.9
55°	499.6	517.9	563.7	608.0	629.4
57.5°	456.8	481.2	531.6	582.1	605.0
60°	417.1	440.0	501.1	556.1	579.0
62.5°	374.3	404.8	470.5	528.6	551.5
65°	330.0	363.6	438.5	496.5	519.4
67.5°	290.3	326.9	406.4	464.4	487.3
70°	242.9	288.7	371.2	429.3	452.2
72.5°	198.6	249.0	334.6	391.1	412.5
75°	155.8	212.4	296.4	346.8	357.5
77.5°	116.1	175.7	256.7	278.0	270.4
80°	82.5	140.5	200.1	189.4	194.0
82.5°	53.5	106.9	123.7	140.5	145.1
85°	30.6	62.6	76.4	82.5	85.6
87.5°	13.7	22.9	30.6	30.6	29.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)