

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: P313599

Luminaire Tested: **24FCZ2-45-UNV-L83050-RDP-CA125-W2A-U-5000K**

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: P313599
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: 24FCZ2-45-UNV-L83050-RDP-CA125-W2A-U-5000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" ACRYLIC SHEET
Light Source: (168) 5000K 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: 2943.0 lumens
Efficiency: N/A
Efficacy: 74.7 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

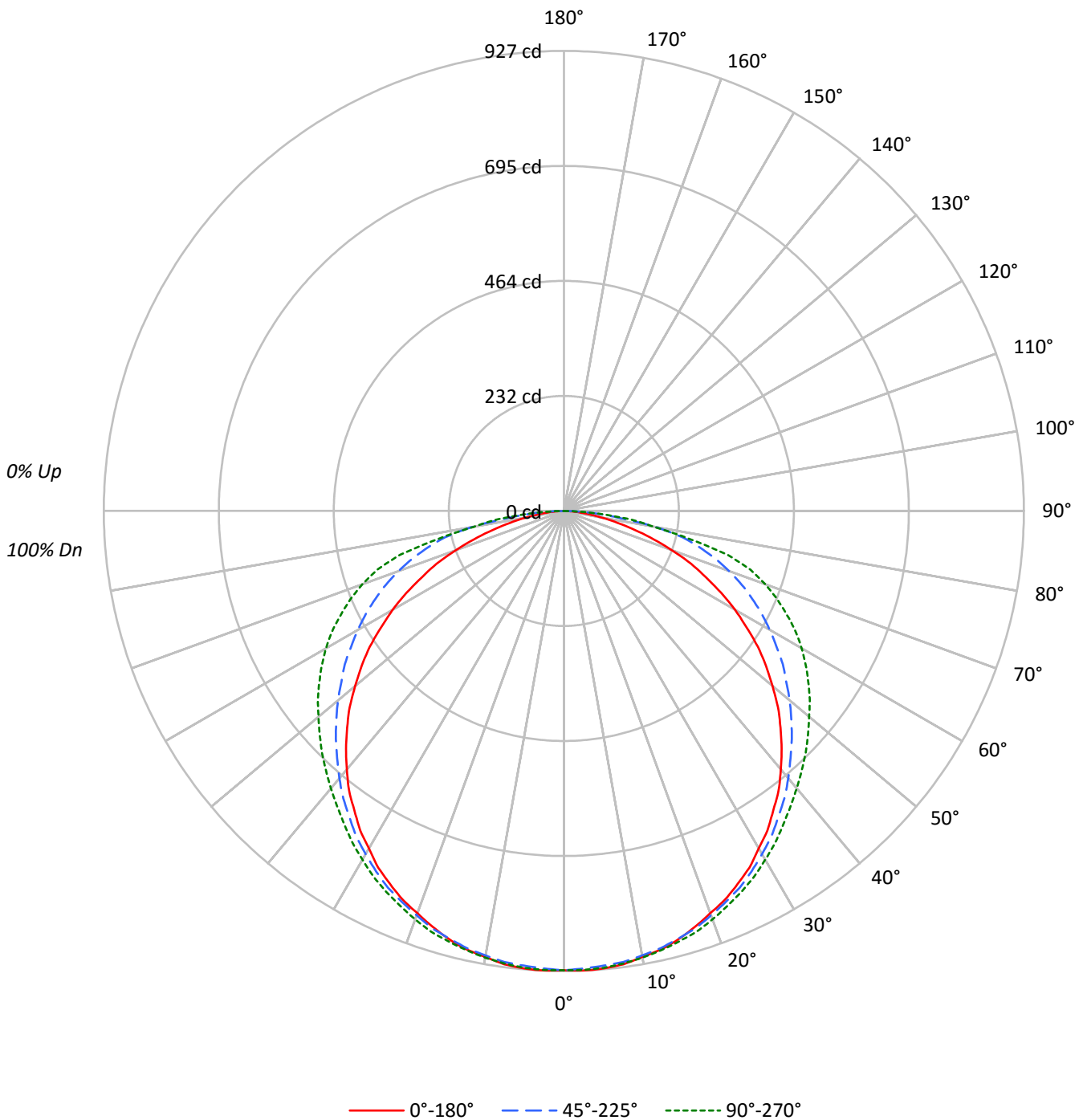
Input Watts (W): 39.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1245	1245	1245
5°	1250	1242	1248
10°	1247	1242	1248
15°	1244	1242	1251
20°	1235	1242	1254
25°	1231	1244	1257
30°	1220	1241	1261
35°	1208	1237	1266
40°	1195	1236	1282
45°	1175	1236	1311
50°	1149	1244	1351
55°	1120	1264	1411
60°	1072	1288	1489
65°	1004	1334	1580
70°	913	1395	1700
75°	774	1472	1776
80°	611	1481	1437
85°	451	1127	1261



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	87.8	3.0
10°-20°	252.7	8.6
20°-30°	386.4	13.1
30°-40°	472.3	16.0
40°-50°	503.4	17.1
50°-60°	481.3	16.4
60°-70°	407.8	13.9
70°-80°	274.0	9.3
80°-90°	77.3	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°	726.8	24.7
0°-40°	1199.2	40.7
0°-60°	2183.9	74.2
0°-90°	2943.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2943.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	926	926	926	926	926	
5°	926	924	920	924	924	88
15°	893	893	892	899	898	252
25°	829	832	838	845	847	382
35°	736	742	753	768	771	461
45°	618	628	650	677	689	476
55°	477	495	539	581	601	425
65°	315	347	419	474	496	313
75°	149	203	283	331	342	159
85°	29	60	73	79	82	36
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	925.5	925.5	925.5	925.5	925.5
2.5°	926.9	926.9	922.6	925.5	925.5
5°	925.5	924.0	919.7	924.0	924.0
7.5°	921.1	919.7	916.7	921.1	919.7
10°	912.4	912.4	909.4	913.8	913.8
12.5°	905.1	903.6	902.1	908.0	906.5
15°	893.4	893.4	891.9	899.2	897.8
17.5°	878.8	880.2	881.7	887.5	889.0
20°	862.7	865.6	867.1	875.9	875.9
22.5°	848.1	849.6	852.5	861.3	861.3
25°	829.1	832.1	837.9	845.2	846.7
27.5°	810.2	811.6	818.9	829.1	830.6
30°	785.4	789.7	798.5	810.2	811.6
32.5°	763.5	767.8	778.1	789.7	792.7
35°	735.7	741.6	753.2	767.8	770.8
37.5°	710.9	715.3	729.9	745.9	750.3
40°	680.2	689.0	703.6	722.6	729.9
42.5°	649.6	658.4	675.9	700.7	709.4
45°	617.5	627.7	649.6	677.3	689.0
47.5°	585.4	597.0	621.9	654.0	667.1
50°	548.9	563.5	594.1	630.6	645.2
52.5°	513.8	531.4	564.9	605.8	624.8
55°	477.3	494.9	538.7	581.0	601.4
57.5°	436.5	459.8	508.0	556.2	578.1
60°	398.5	420.4	478.8	531.4	553.3
62.5°	357.6	386.8	449.6	505.1	527.0
65°	315.3	347.4	419.0	474.4	496.3
67.5°	277.4	312.4	388.3	443.8	465.7
70°	232.1	275.9	354.7	410.2	432.1
72.5°	189.8	237.9	319.7	373.7	394.1
75°	148.9	202.9	283.2	331.4	341.6
77.5°	110.9	167.9	245.2	265.7	258.4
80°	78.8	134.3	191.2	181.0	185.4
82.5°	51.1	102.2	118.2	134.3	138.7
85°	29.2	59.9	73.0	78.8	81.7
87.5°	13.1	21.9	29.2	29.2	27.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)