

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: P313604

Luminaire Tested: **24FCZ2-45-UNV-L83050-RDP-CP125-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: P313604
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-CP125-W2A-U-5000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" POLYCARB 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: 2886.0 lumens
Efficiency: N/A
Efficacy: 73.2 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

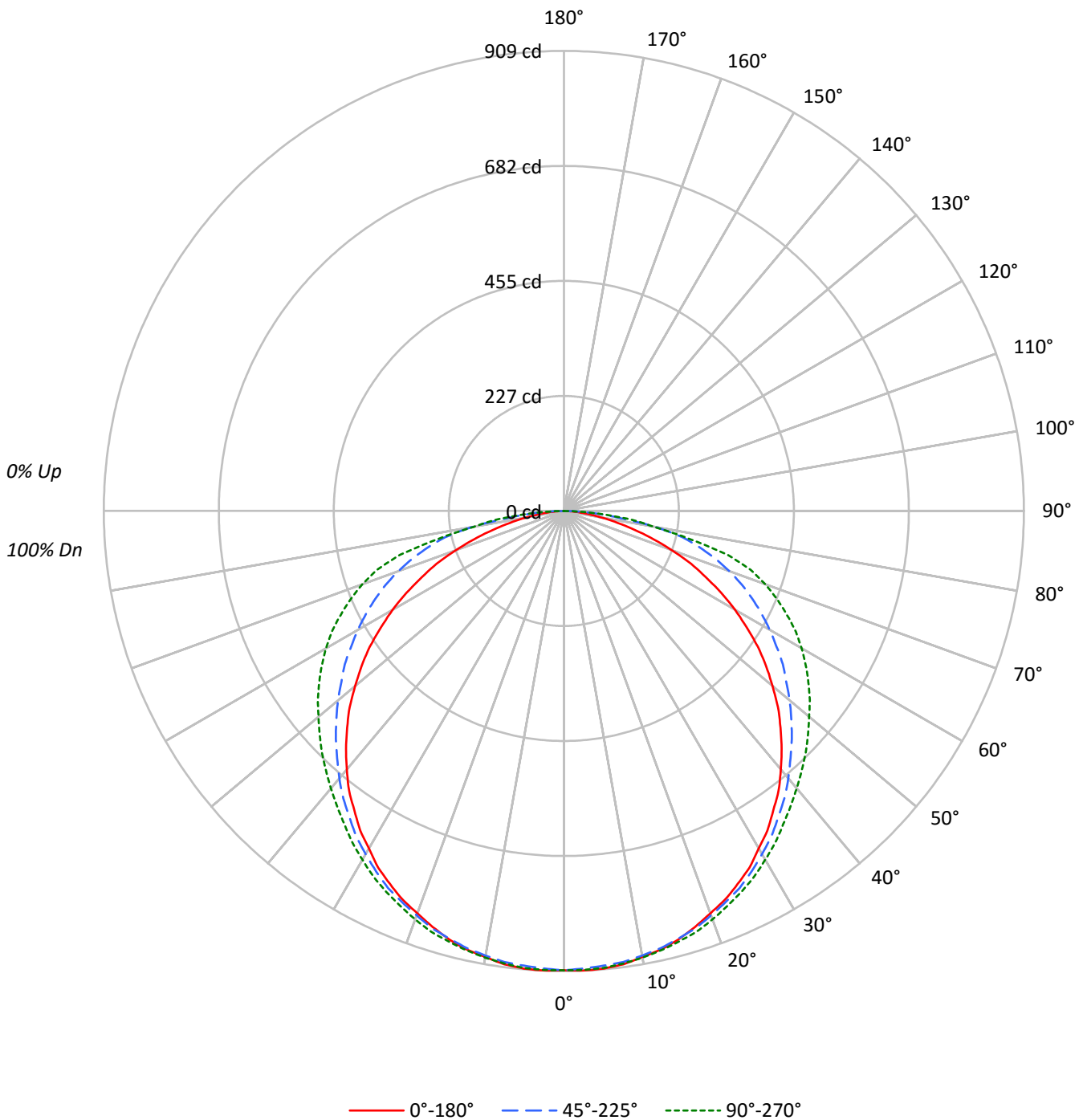
Input Watts (W): 39.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1221	1221	1221
5°	1226	1218	1224
10°	1222	1218	1224
15°	1220	1218	1226
20°	1211	1217	1230
25°	1207	1220	1233
30°	1196	1216	1237
35°	1185	1213	1241
40°	1172	1212	1257
45°	1152	1212	1286
50°	1127	1220	1324
55°	1098	1239	1384
60°	1052	1263	1460
65°	984	1308	1550
70°	895	1369	1667
75°	759	1444	1742
80°	599	1453	1409
85°	442	1105	1238



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	86.1	3.0
10°-20°	247.8	8.6
20°-30°	378.9	13.1
30°-40°	463.2	16.0
40°-50°	493.7	17.1
50°-60°	472.0	16.4
60°-70°	399.8	13.9
70°-80°	268.7	9.3
80°-90°	75.8	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°	712.8	24.7
0°-40°	1175.9	40.7
0°-60°	2141.6	74.2
0°-90°	2886.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2886.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	908	908	908	908	908	
5°	908	906	902	906	906	86
15°	876	876	875	882	880	247
25°	813	816	822	829	830	375
35°	722	727	739	753	756	452
45°	606	616	637	664	676	467
55°	468	485	528	570	590	417
65°	309	341	411	465	487	307
75°	146	199	278	325	335	156
85°	29	59	72	77	80	35
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	907.6	907.6	907.6	907.6	907.6
2.5°	909.0	909.0	904.7	907.6	907.6
5°	907.6	906.1	901.8	906.1	906.1
7.5°	903.3	901.8	899.0	903.3	901.8
10°	894.7	894.7	891.8	896.1	896.1
12.5°	887.5	886.1	884.7	890.4	889.0
15°	876.1	876.1	874.6	881.8	880.4
17.5°	861.8	863.2	864.6	870.3	871.8
20°	846.0	848.9	850.3	858.9	858.9
22.5°	831.7	833.1	836.0	844.6	844.6
25°	813.1	815.9	821.7	828.8	830.3
27.5°	794.5	795.9	803.1	813.1	814.5
30°	770.1	774.4	783.0	794.5	795.9
32.5°	748.7	753.0	763.0	774.4	777.3
35°	721.5	727.2	738.6	753.0	755.8
37.5°	697.1	701.4	715.7	731.5	735.8
40°	667.1	675.7	690.0	708.6	715.7
42.5°	637.0	645.6	662.8	687.1	695.7
45°	605.5	615.5	637.0	664.2	675.7
47.5°	574.0	585.5	609.8	641.3	654.2
50°	538.2	552.6	582.6	618.4	632.7
52.5°	503.9	521.1	554.0	594.1	612.7
55°	468.1	485.3	528.2	569.7	589.8
57.5°	428.0	450.9	498.2	545.4	566.9
60°	390.8	412.3	469.5	521.1	542.5
62.5°	350.7	379.3	440.9	495.3	516.8
65°	309.2	340.7	410.8	465.2	486.7
67.5°	272.0	306.3	380.8	435.2	456.6
70°	227.6	270.6	347.9	402.2	423.7
72.5°	186.1	233.3	313.5	366.5	386.5
75°	146.0	199.0	277.7	324.9	335.0
77.5°	108.8	164.6	240.5	260.5	253.4
80°	77.3	131.7	187.5	177.5	181.8
82.5°	50.1	100.2	116.0	131.7	136.0
85°	28.6	58.7	71.6	77.3	80.2
87.5°	12.9	21.5	28.6	28.6	27.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)