

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: P310198

Luminaire Tested: **24FCZ2-50HE-UNV-L82765-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: P310198
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-L82765-RDP-CP125-W2A-U-5000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" POLYCARB SHEET
Light Source: (336) 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: 3109.0 lumens
Efficiency: N/A
Efficacy: 79.1 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

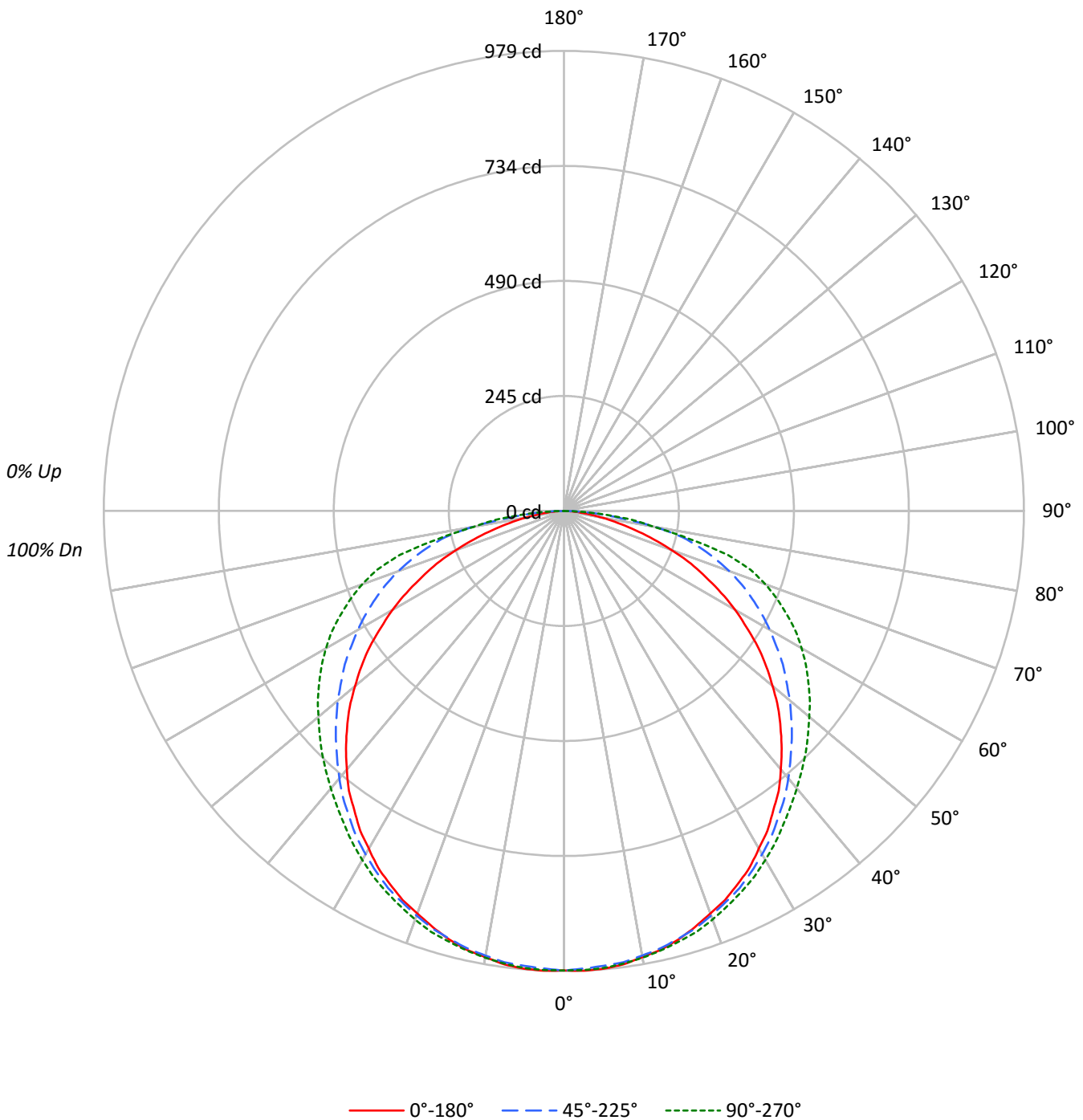
Input Watts (W): 39.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1315	1315	1315
5°	1321	1312	1318
10°	1317	1313	1319
15°	1315	1312	1321
20°	1305	1312	1325
25°	1300	1314	1328
30°	1289	1310	1332
35°	1277	1307	1337
40°	1262	1306	1354
45°	1241	1306	1385
50°	1214	1314	1427
55°	1183	1335	1490
60°	1133	1361	1573
65°	1060	1409	1669
70°	965	1474	1796
75°	818	1555	1876
80°	645	1565	1517
85°	475	1190	1334



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	92.7	3.0
10°-20°	266.9	8.6
20°-30°	408.2	13.1
30°-40°	499.0	16.0
40°-50°	531.8	17.1
50°-60°	508.5	16.4
60°-70°	430.8	13.9
70°-80°	289.5	9.3
80°-90°	81.7	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°	767.8	24.7
0°-40°	1266.8	40.7
0°-60°	2307.1	74.2
0°-90°	3109.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3109.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	978	978	978	978	978	
5°	978	976	972	976	976	93
15°	944	944	942	950	948	266
25°	876	879	885	893	894	404
35°	777	783	796	811	814	487
45°	652	663	686	716	728	503
55°	504	523	569	614	635	449
65°	333	367	443	501	524	331
75°	157	214	299	350	361	168
85°	31	63	77	83	86	38
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	977.7	977.7	977.7	977.7	977.7
2.5°	979.2	979.2	974.6	977.7	977.7
5°	977.7	976.1	971.5	976.1	976.1
7.5°	973.1	971.5	968.4	973.1	971.5
10°	963.8	963.8	960.7	965.4	965.4
12.5°	956.1	954.6	953.0	959.2	957.6
15°	943.8	943.8	942.2	949.9	948.4
17.5°	928.3	929.9	931.4	937.6	939.1
20°	911.4	914.5	916.0	925.3	925.3
22.5°	896.0	897.5	900.6	909.8	909.8
25°	875.9	879.0	885.2	892.9	894.4
27.5°	855.9	857.4	865.1	875.9	877.5
30°	829.7	834.3	843.5	855.9	857.4
32.5°	806.5	811.1	821.9	834.3	837.4
35°	777.2	783.4	795.7	811.1	814.2
37.5°	751.0	755.6	771.1	788.0	792.6
40°	718.6	727.9	743.3	763.3	771.1
42.5°	686.2	695.5	714.0	740.2	749.5
45°	652.3	663.1	686.2	715.5	727.9
47.5°	618.4	630.7	656.9	690.9	704.7
50°	579.8	595.3	627.6	666.2	681.6
52.5°	542.8	561.3	596.8	640.0	660.0
55°	504.3	522.8	569.0	613.8	635.3
57.5°	461.1	485.8	536.7	587.5	610.7
60°	421.0	444.1	505.8	561.3	584.5
62.5°	377.8	408.7	475.0	533.6	556.7
65°	333.1	367.0	442.6	501.2	524.3
67.5°	293.0	330.0	410.2	468.8	491.9
70°	245.2	291.5	374.7	433.3	456.5
72.5°	200.5	251.4	337.7	394.8	416.4
75°	157.3	214.4	299.2	350.1	360.9
77.5°	117.2	177.3	259.1	280.7	273.0
80°	83.3	141.9	202.0	191.2	195.8
82.5°	54.0	107.9	124.9	141.9	146.5
85°	30.8	63.2	77.1	83.3	86.4
87.5°	13.9	23.1	30.8	30.8	29.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)