

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: P310241

Luminaire Tested: **24FCZ2-50-UNV-L82765-RDP-CP125-W2A-U-4000K**

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: P310241
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-L82765-RDP-CP125-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" POLYCARB SHEET
Light Source: (168) 4000K 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: 3000.0 lumens
Efficiency: N/A
Efficacy: 69.4 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

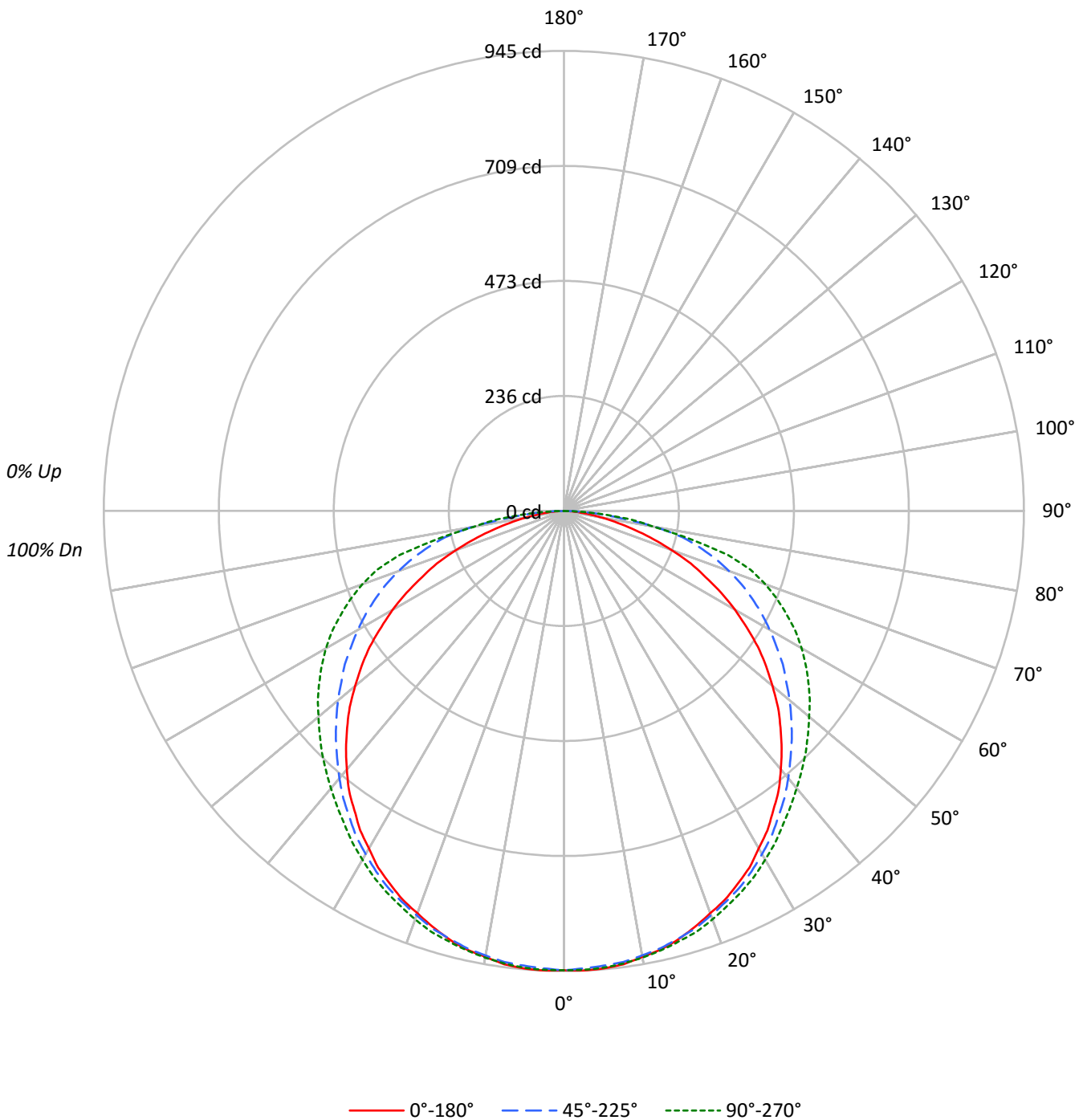
Input Watts (W): 43.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1269	1269	1269
5°	1274	1266	1272
10°	1271	1267	1273
15°	1269	1266	1275
20°	1259	1266	1278
25°	1255	1268	1281
30°	1244	1265	1285
35°	1232	1261	1291
40°	1218	1260	1307
45°	1198	1260	1337
50°	1171	1268	1377
55°	1141	1288	1438
60°	1093	1313	1518
65°	1023	1360	1611
70°	931	1423	1733
75°	789	1501	1810
80°	623	1510	1464
85°	460	1149	1286



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	89.5	3.0
10°-20°	257.6	8.6
20°-30°	393.9	13.1
30°-40°	481.5	16.0
40°-50°	513.2	17.1
50°-60°	490.6	16.4
60°-70°	415.6	13.9
70°-80°	279.3	9.3
80°-90°	78.8	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°	740.9	24.7
0°-40°	1222.4	40.7
0°-60°	2226.2	74.2
0°-90°	3000.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3000.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	943	943	943	943	943	
5°	943	942	938	942	942	90
15°	911	911	909	917	915	257
25°	845	848	854	862	863	390
35°	750	756	768	783	786	470
45°	629	640	662	690	702	485
55°	487	504	549	592	613	433
65°	321	354	427	484	506	319
75°	152	207	289	338	348	163
85°	30	61	74	80	83	37
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	943.4	943.4	943.4	943.4	943.4
2.5°	944.9	944.9	940.4	943.4	943.4
5°	943.4	941.9	937.5	941.9	941.9
7.5°	939.0	937.5	934.5	939.0	937.5
10°	930.0	930.0	927.0	931.5	931.5
12.5°	922.6	921.1	919.6	925.6	924.1
15°	910.7	910.7	909.2	916.6	915.1
17.5°	895.8	897.3	898.8	904.7	906.2
20°	879.4	882.4	883.9	892.8	892.8
22.5°	864.5	866.0	869.0	877.9	877.9
25°	845.2	848.2	854.1	861.6	863.1
27.5°	825.9	827.3	834.8	845.2	846.7
30°	800.6	805.0	814.0	825.9	827.3
32.5°	778.2	782.7	793.1	805.0	808.0
35°	750.0	755.9	767.8	782.7	785.7
37.5°	724.7	729.1	744.0	760.4	764.9
40°	693.4	702.4	717.2	736.6	744.0
42.5°	662.2	671.1	689.0	714.3	723.2
45°	629.4	639.9	662.2	690.4	702.4
47.5°	596.7	608.6	633.9	666.6	680.0
50°	559.5	574.4	605.6	642.8	657.7
52.5°	523.8	541.6	575.9	617.5	636.9
55°	486.6	504.4	549.1	592.2	613.1
57.5°	444.9	468.7	517.8	566.9	589.3
60°	406.2	428.6	488.1	541.6	564.0
62.5°	364.6	394.3	458.3	514.9	537.2
65°	321.4	354.2	427.1	483.6	505.9
67.5°	282.7	318.4	395.8	452.4	474.7
70°	236.6	281.2	361.6	418.1	440.5
72.5°	193.4	242.5	325.9	380.9	401.8
75°	151.8	206.8	288.7	337.8	348.2
77.5°	113.1	171.1	250.0	270.8	263.4
80°	80.4	136.9	194.9	184.5	189.0
82.5°	52.1	104.2	120.5	136.9	141.4
85°	29.8	61.0	74.4	80.4	83.3
87.5°	13.4	22.3	29.8	29.8	28.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)