

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: P310242

Luminaire Tested: **24FCZ2-50-UNV-L82765-RDP-CP125-W2A-U-4500K**

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: P310242
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-4500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" POLYCARB SHEET
Light Source: (168) 4500K 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: 3053.0 lumens
Efficiency: N/A
Efficacy: 70.2 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

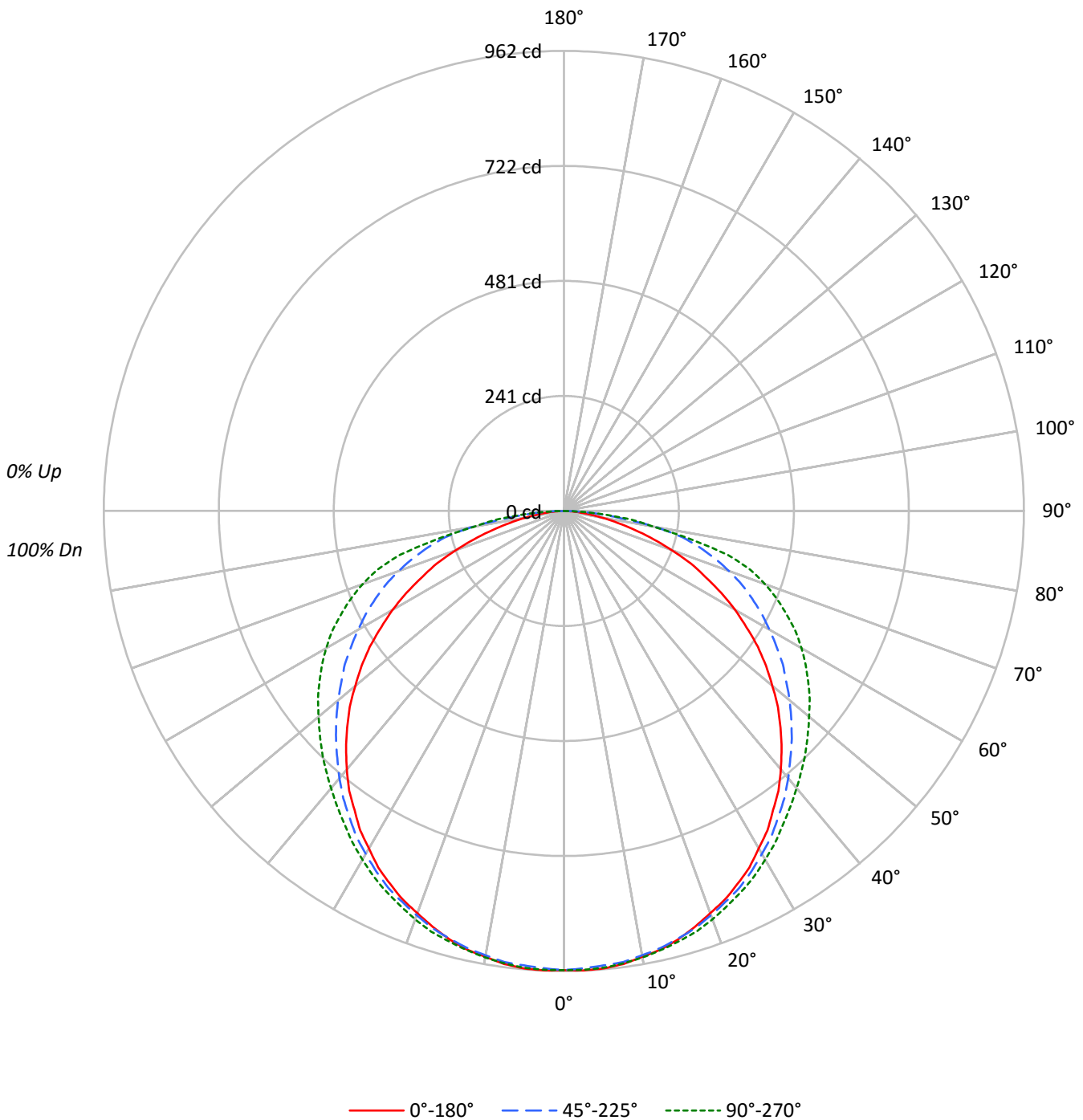
Input Watts (W): 43.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1292	1292	1292
5°	1297	1289	1295
10°	1293	1289	1295
15°	1291	1289	1297
20°	1281	1288	1301
25°	1277	1290	1304
30°	1266	1287	1308
35°	1254	1283	1313
40°	1239	1282	1330
45°	1219	1282	1360
50°	1192	1290	1401
55°	1162	1311	1464
60°	1112	1337	1544
65°	1041	1384	1639
70°	947	1448	1763
75°	803	1527	1842
80°	634	1537	1490
85°	468	1169	1309



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	91.1	3.0
10°-20°	262.1	8.6
20°-30°	400.8	13.1
30°-40°	490.0	16.0
40°-50°	522.2	17.1
50°-60°	499.3	16.4
60°-70°	423.0	13.9
70°-80°	284.3	9.3
80°-90°	80.2	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°	754.0	24.7
0°-40°	1244.0	40.7
0°-60°	2265.5	74.2
0°-90°	3053.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3053.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	960	960	960	960	960	
5°	960	959	954	959	959	91
15°	927	927	925	933	931	261
25°	860	863	869	877	878	396
35°	763	769	781	796	800	478
45°	641	651	674	703	715	494
55°	495	513	559	603	624	441
65°	327	360	435	492	515	325
75°	154	210	294	344	354	165
85°	30	62	76	82	85	37
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	960.1	960.1	960.1	960.1	960.1
2.5°	961.6	961.6	957.1	960.1	960.1
5°	960.1	958.6	954.0	958.6	958.6
7.5°	955.5	954.0	951.0	955.5	954.0
10°	946.5	946.5	943.4	948.0	948.0
12.5°	938.9	937.4	935.9	941.9	940.4
15°	926.8	926.8	925.3	932.8	931.3
17.5°	911.6	913.1	914.7	920.7	922.2
20°	895.0	898.0	899.5	908.6	908.6
22.5°	879.8	881.3	884.4	893.5	893.5
25°	860.1	863.2	869.2	876.8	878.3
27.5°	840.4	842.0	849.5	860.1	861.7
30°	814.7	819.2	828.3	840.4	842.0
32.5°	792.0	796.5	807.1	819.2	822.3
35°	763.2	769.3	781.4	796.5	799.6
37.5°	737.5	742.0	757.2	773.8	778.4
40°	705.7	714.8	729.9	749.6	757.2
42.5°	673.9	683.0	701.1	726.9	736.0
45°	640.6	651.2	673.9	702.6	714.8
47.5°	607.2	619.4	645.1	678.4	692.0
50°	569.4	584.5	616.3	654.2	669.3
52.5°	533.0	551.2	586.0	628.4	648.1
55°	495.2	513.4	558.8	602.7	623.9
57.5°	452.8	477.0	527.0	577.0	599.7
60°	413.4	436.1	496.7	551.2	573.9
62.5°	371.0	401.3	466.4	524.0	546.7
65°	327.1	360.4	434.6	492.2	514.9
67.5°	287.7	324.1	402.8	460.4	483.1
70°	240.8	286.2	368.0	425.5	448.2
72.5°	196.9	246.8	331.6	387.7	408.9
75°	154.5	210.5	293.8	343.8	354.4
77.5°	115.1	174.1	254.4	275.6	268.0
80°	81.8	139.3	198.4	187.8	192.3
82.5°	53.0	106.0	122.7	139.3	143.9
85°	30.3	62.1	75.7	81.8	84.8
87.5°	13.6	22.7	30.3	30.3	28.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)