

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: P310060

Luminaire Tested: **24FCZ2-40-UNV-L82765-RDP-CP125-W2A-U-3500K**

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: P310060
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: 24FCZ2-40-UNV-L82765-RDP-CP125-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" POLYCARB SHEET
Light Source: (168) 3500K 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: 2376.0 lumens
Efficiency: N/A
Efficacy: 72.2 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

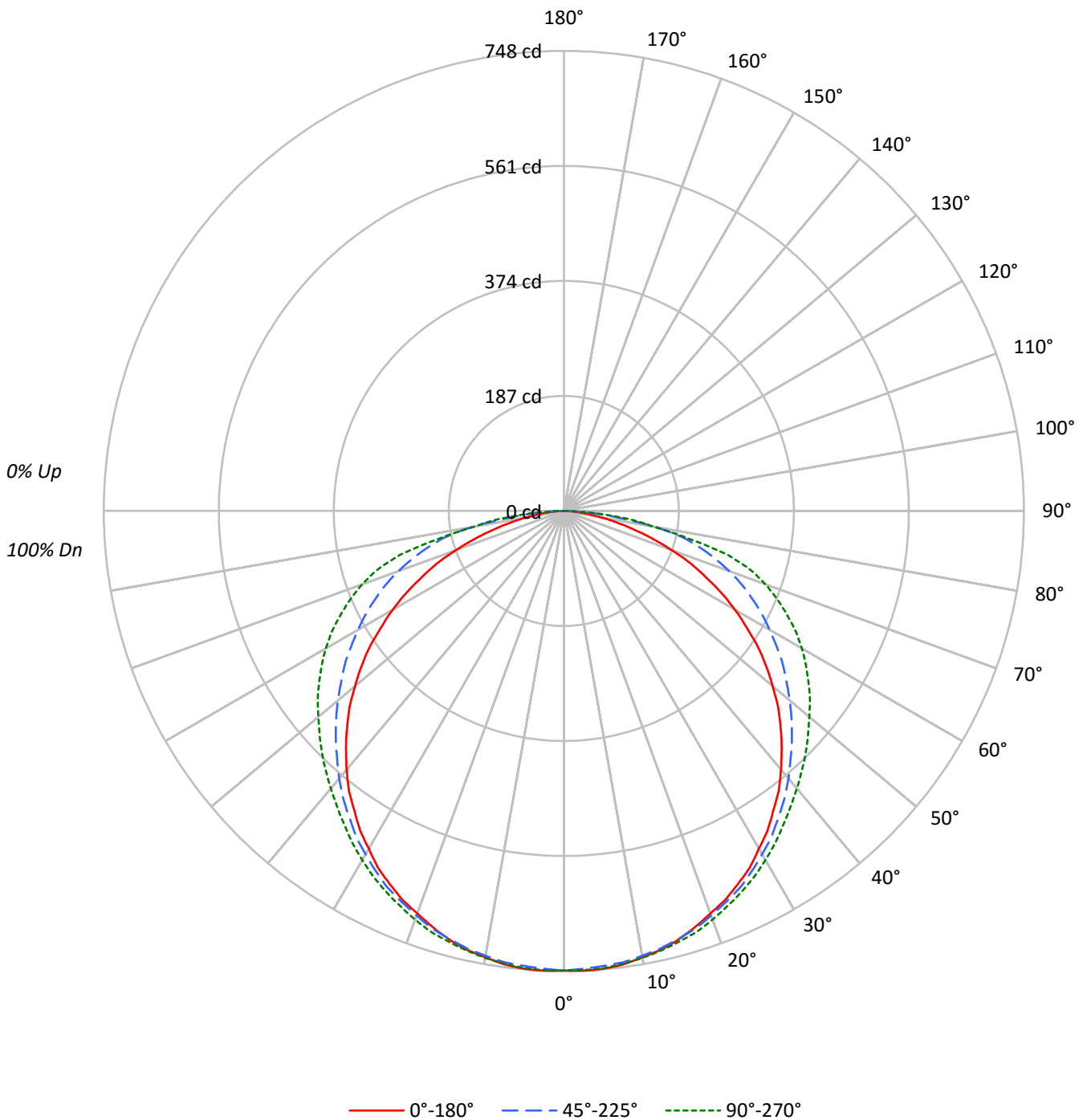
Input Watts (W): 32.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	68	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°	1005	1005	1005
5°	1009	1003	1008
10°	1006	1003	1008
15°	1005	1003	1010
20°	997	1002	1012
25°	994	1004	1015
30°	985	1002	1018
35°	976	999	1022
40°	965	998	1035
45°	949	998	1059
50°	928	1004	1090
55°	904	1020	1139
60°	866	1040	1202
65°	811	1077	1276
70°	737	1127	1372
75°	625	1188	1434
80°	493	1196	1160
85°	364	909	1019



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	70.9	3.0
10°-20°	204.0	8.6
20°-30°	311.9	13.1
30°-40°	381.3	16.0
40°-50°	406.4	17.1
50°-60°	388.6	16.4
60°-70°	329.2	13.9
70°-80°	221.2	9.3
80°-90°	62.4	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°	586.8	24.7
0°-40°	968.1	40.7
0°-60°	1763.2	74.2
0°-90°	2376.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2376.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	747	747	747	747	747	
5°	747	746	742	746	746	71
15°	721	721	720	726	725	203
25°	669	672	676	682	684	309
35°	594	599	608	620	622	372
45°	498	507	524	547	556	384
55°	385	400	435	469	486	343
65°	255	280	338	383	401	253
75°	120	164	229	268	276	129
85°	24	48	59	64	66	29
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	747.2	747.2	747.2	747.2	747.2
2.5°	748.4	748.4	744.8	747.2	747.2
5°	747.2	746.0	742.5	746.0	746.0
7.5°	743.6	742.5	740.1	743.6	742.5
10°	736.6	736.6	734.2	737.8	737.8
12.5°	730.7	729.5	728.3	733.0	731.9
15°	721.3	721.3	720.1	726.0	724.8
17.5°	709.5	710.6	711.8	716.5	717.7
20°	696.5	698.9	700.0	707.1	707.1
22.5°	684.7	685.9	688.3	695.3	695.3
25°	669.4	671.8	676.5	682.4	683.5
27.5°	654.1	655.3	661.2	669.4	670.6
30°	634.0	637.6	644.7	654.1	655.3
32.5°	616.4	619.9	628.2	637.6	639.9
35°	594.0	598.7	608.1	619.9	622.3
37.5°	573.9	577.5	589.3	602.2	605.8
40°	549.2	556.3	568.0	583.4	589.3
42.5°	524.4	531.5	545.7	565.7	572.8
45°	498.5	506.8	524.4	546.8	556.3
47.5°	472.6	482.0	502.1	528.0	538.6
50°	443.1	454.9	479.7	509.1	520.9
52.5°	414.8	429.0	456.1	489.1	504.4
55°	385.4	399.5	434.9	469.1	485.6
57.5°	352.4	371.2	410.1	449.0	466.7
60°	321.7	339.4	386.6	429.0	446.7
62.5°	288.7	312.3	363.0	407.8	425.4
65°	254.6	280.5	338.2	383.0	400.7
67.5°	223.9	252.2	313.5	358.3	375.9
70°	187.4	222.7	286.4	331.2	348.8
72.5°	153.2	192.1	258.1	301.7	318.2
75°	120.2	163.8	228.6	267.5	275.8
77.5°	89.6	135.5	198.0	214.5	208.6
80°	63.6	108.4	154.4	146.1	149.7
82.5°	41.2	82.5	95.5	108.4	112.0
85°	23.6	48.3	58.9	63.6	66.0
87.5°	10.6	17.7	23.6	23.6	22.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)