

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: P310643

Luminaire Tested: **24FCZ2-35-UNV-L82765-CP125-W2A-U-2700K**

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: P310643
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-15)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-35-UNV-L82765-CP125-W2A-U-2700K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" POLYCARB SHEET
Light Source: (168) 2700K 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: 2916.0 lumens
Efficiency: N/A
Efficacy: 104.1 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

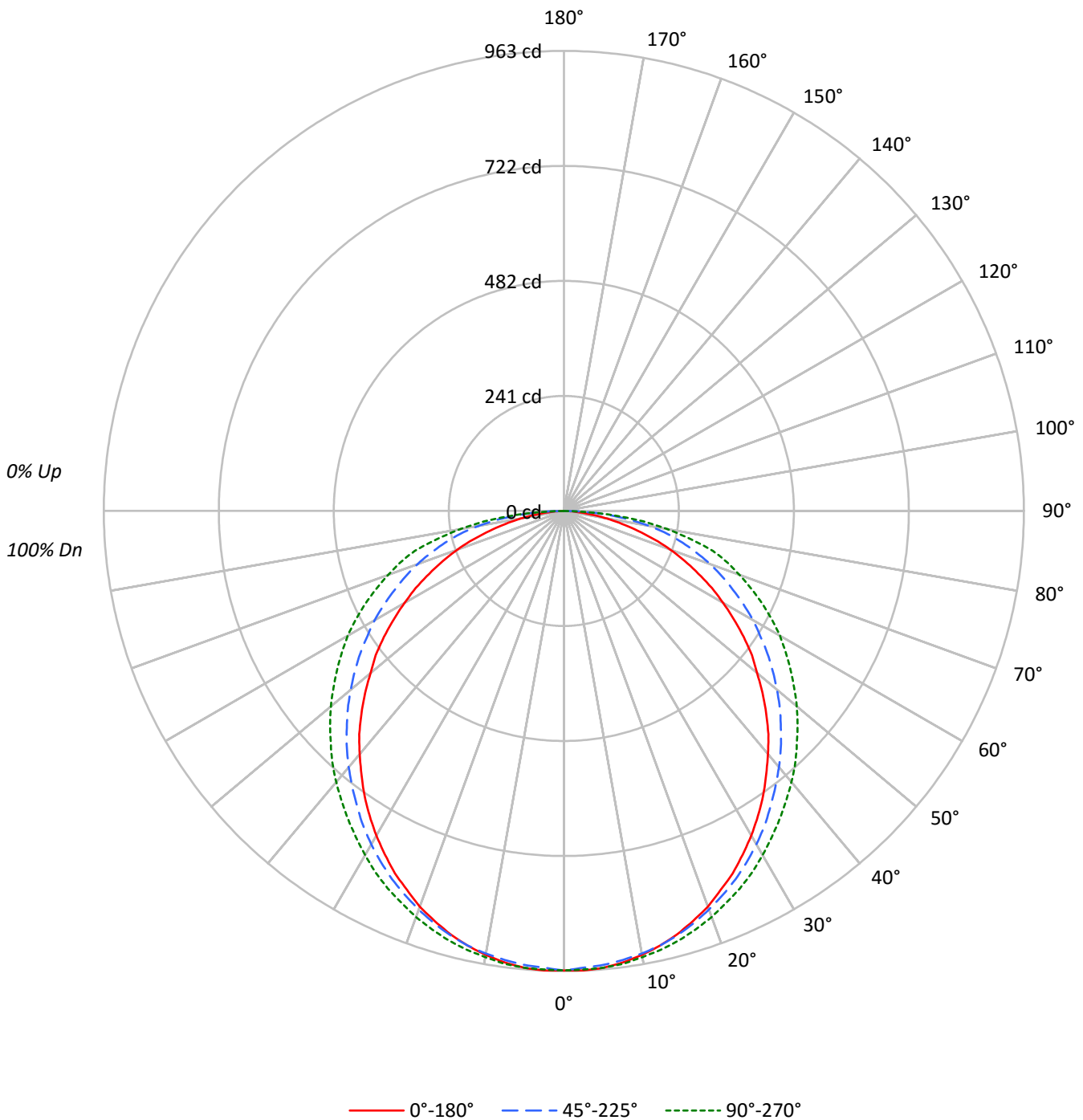
Input Watts (W): 28
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	92	89	92	89	87	88	86	84	82
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	79	67	58	52	64	57	51	62	56	50	60	54	50	47
5	74	61	52	45	72	60	51	44	58	50	44	56	49	43	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	64	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	37	31	57	45	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1294	1294	1294
5°	1296	1288	1296
10°	1289	1285	1295
15°	1278	1280	1296
20°	1262	1272	1295
25°	1242	1262	1294
30°	1219	1252	1293
35°	1195	1239	1293
40°	1167	1230	1302
45°	1140	1222	1313
50°	1106	1219	1333
55°	1078	1221	1359
60°	1036	1231	1406
65°	989	1245	1457
70°	936	1282	1538
75°	835	1338	1680
80°	712	1417	1717
85°	508	1403	1643



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	91.0	3.1
10°-20°	260.2	8.9
20°-30°	393.1	13.5
30°-40°	473.7	16.2
40°-50°	497.3	17.1
50°-60°	465.3	16.0
60°-70°	384.2	13.2
70°-80°	261.8	9.0
80°-90°	89.3	3.1
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°	744.3	25.5
0°-40°	1218.0	41.8
0°-60°	2180.6	74.8
0°-90°	2916.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2916.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	962	962	962	962	962	
5°	960	959	954	960	960	91
15°	917	918	919	929	931	259
25°	837	841	850	867	872	385
35°	728	735	755	780	788	455
45°	599	611	642	677	690	462
55°	460	478	520	563	580	410
65°	311	337	391	440	458	308
75°	161	197	257	306	323	171
85°	33	65	91	103	106	41
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	961.7	961.7	961.7	961.7	961.7
2.5°	962.6	961.7	956.8	961.7	960.7
5°	959.7	958.8	953.9	959.7	959.7
7.5°	953.0	953.0	948.1	954.9	955.9
10°	943.3	943.3	940.4	948.1	948.1
12.5°	931.7	931.7	931.7	939.4	940.4
15°	917.2	918.1	919.1	928.8	930.7
17.5°	899.8	901.7	904.6	916.2	918.1
20°	881.4	883.3	888.1	901.7	904.6
22.5°	858.2	863.0	869.8	885.2	888.1
25°	836.9	840.7	850.4	866.9	871.7
27.5°	810.7	816.5	829.1	846.5	853.3
30°	784.6	790.4	805.9	826.2	832.0
32.5°	756.6	765.3	781.7	803.0	809.8
35°	727.5	735.3	754.6	779.8	787.5
37.5°	695.6	706.3	727.5	754.6	764.3
40°	664.7	676.3	700.5	729.5	741.1
42.5°	633.7	645.3	672.4	705.3	716.9
45°	598.9	611.4	642.4	677.2	689.8
47.5°	564.0	579.5	613.4	650.1	663.7
50°	528.2	545.7	582.4	621.1	636.6
52.5°	496.3	512.8	551.5	593.1	607.6
55°	459.6	477.9	520.5	563.1	579.5
57.5°	421.8	442.1	487.6	534.0	550.5
60°	385.1	407.3	457.6	504.1	522.4
62.5°	349.3	371.5	423.8	472.1	490.5
65°	310.6	336.7	390.9	440.2	457.6
67.5°	273.8	301.9	358.9	407.3	424.7
70°	238.0	265.1	326.0	373.4	390.9
72.5°	199.3	230.3	291.2	340.6	358.9
75°	160.6	197.4	257.3	305.7	323.1
77.5°	124.8	162.5	222.5	262.2	270.9
80°	91.9	130.6	182.9	210.9	221.6
82.5°	59.0	97.7	139.3	159.6	168.3
85°	32.9	64.8	90.9	102.6	106.4
87.5°	13.5	28.1	36.8	41.6	41.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)