

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: P313176

Luminaire Tested: **24FCZ2-40-UNV-L83050-HRP-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: P313176
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-20)
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-L83050-HRP-CP125-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 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: 2809.0 lumens
Efficiency: N/A
Efficacy: 85.9 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

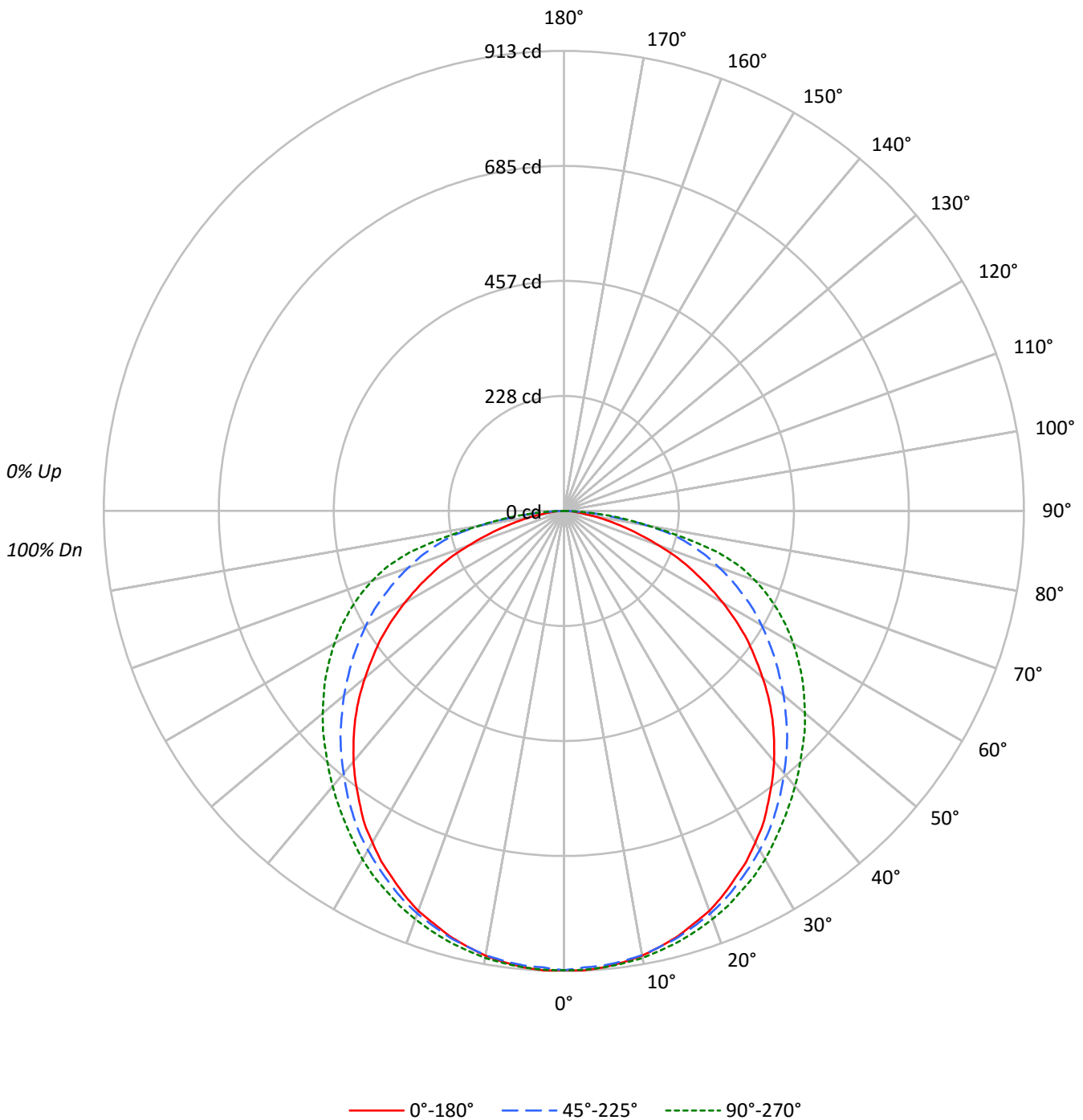
Input Watts (W): 32.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	101	96	93	96	93	90	92	90	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58	56
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	36	30	57	44	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	24	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1226	1226	1226
5°	1228	1223	1228
10°	1224	1223	1231
15°	1217	1220	1232
20°	1209	1217	1234
25°	1194	1212	1236
30°	1180	1208	1241
35°	1161	1202	1242
40°	1140	1194	1254
45°	1114	1193	1273
50°	1078	1191	1307
55°	1040	1200	1354
60°	981	1218	1415
65°	906	1247	1494
70°	791	1291	1591
75°	642	1357	1644
80°	474	1330	1330
85°	363	980	1107



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	86.3	3.1
10°-20°	247.9	8.8
20°-30°	377.4	13.4
30°-40°	458.3	16.3
40°-50°	484.2	17.2
50°-60°	456.9	16.3
60°-70°	379.9	13.5
70°-80°	249.9	8.9
80°-90°	68.1	2.4
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°	711.7	25.3
0°-40°	1170.0	41.7
0°-60°	2111.1	75.2
0°-90°	2809.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2809.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	911	911	911	911	911	
5°	909	909	906	909	909	86
15°	874	875	876	884	884	246
25°	804	809	816	830	833	371
35°	707	715	732	750	756	442
45°	586	597	627	657	669	451
55°	443	462	512	560	577	395
65°	285	318	392	449	469	281
75°	124	180	261	309	316	133
85°	24	52	64	71	72	29
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	911.4	911.4	911.4	911.4	911.4
2.5°	912.6	911.4	906.7	911.4	911.4
5°	909.0	909.0	905.5	909.0	909.0
7.5°	903.2	903.2	900.8	905.5	905.5
10°	896.1	896.1	894.9	900.8	900.8
12.5°	885.5	886.7	885.5	892.6	892.6
15°	873.8	874.9	876.1	884.3	884.3
17.5°	858.5	860.8	863.2	872.6	873.8
20°	844.4	845.5	850.2	860.8	862.0
22.5°	825.5	829.1	834.9	845.5	849.1
25°	804.4	809.1	816.1	830.2	832.6
27.5°	784.4	787.9	797.3	812.6	817.3
30°	759.7	765.6	777.3	792.6	798.5
32.5°	736.2	742.0	756.2	772.6	777.3
35°	706.8	715.0	731.5	750.3	756.2
37.5°	678.5	686.8	706.8	727.9	735.0
40°	649.1	658.5	679.7	704.4	713.8
42.5°	617.4	630.3	653.8	680.9	691.5
45°	585.6	597.4	626.8	657.4	669.1
47.5°	551.5	565.6	597.4	633.9	648.0
50°	515.1	532.7	569.2	609.2	624.4
52.5°	478.6	498.6	539.8	584.5	600.9
55°	443.3	462.2	511.6	559.8	577.4
57.5°	404.5	428.1	482.2	533.9	551.5
60°	364.6	390.4	452.8	506.8	525.7
62.5°	324.6	354.0	424.5	478.6	498.6
65°	284.6	317.5	391.6	449.2	469.2
67.5°	245.8	282.2	361.0	418.6	438.6
70°	201.1	247.0	328.1	384.5	404.5
72.5°	159.9	212.9	296.3	349.3	366.9
75°	123.5	179.9	261.1	309.3	316.3
77.5°	90.6	147.0	224.6	241.1	242.3
80°	61.2	117.6	171.7	169.3	171.7
82.5°	40.0	88.2	108.2	121.1	122.3
85°	23.5	51.7	63.5	70.6	71.7
87.5°	11.8	17.6	22.3	23.5	25.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)