

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: P313546

Luminaire Tested: **24FCZ2-40-UNV-L83050-RDP-CA125-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: P313546
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-L83050-RDP-CA125-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" ACRYLIC 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: 2480.0 lumens
Efficiency: N/A
Efficacy: 75.8 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

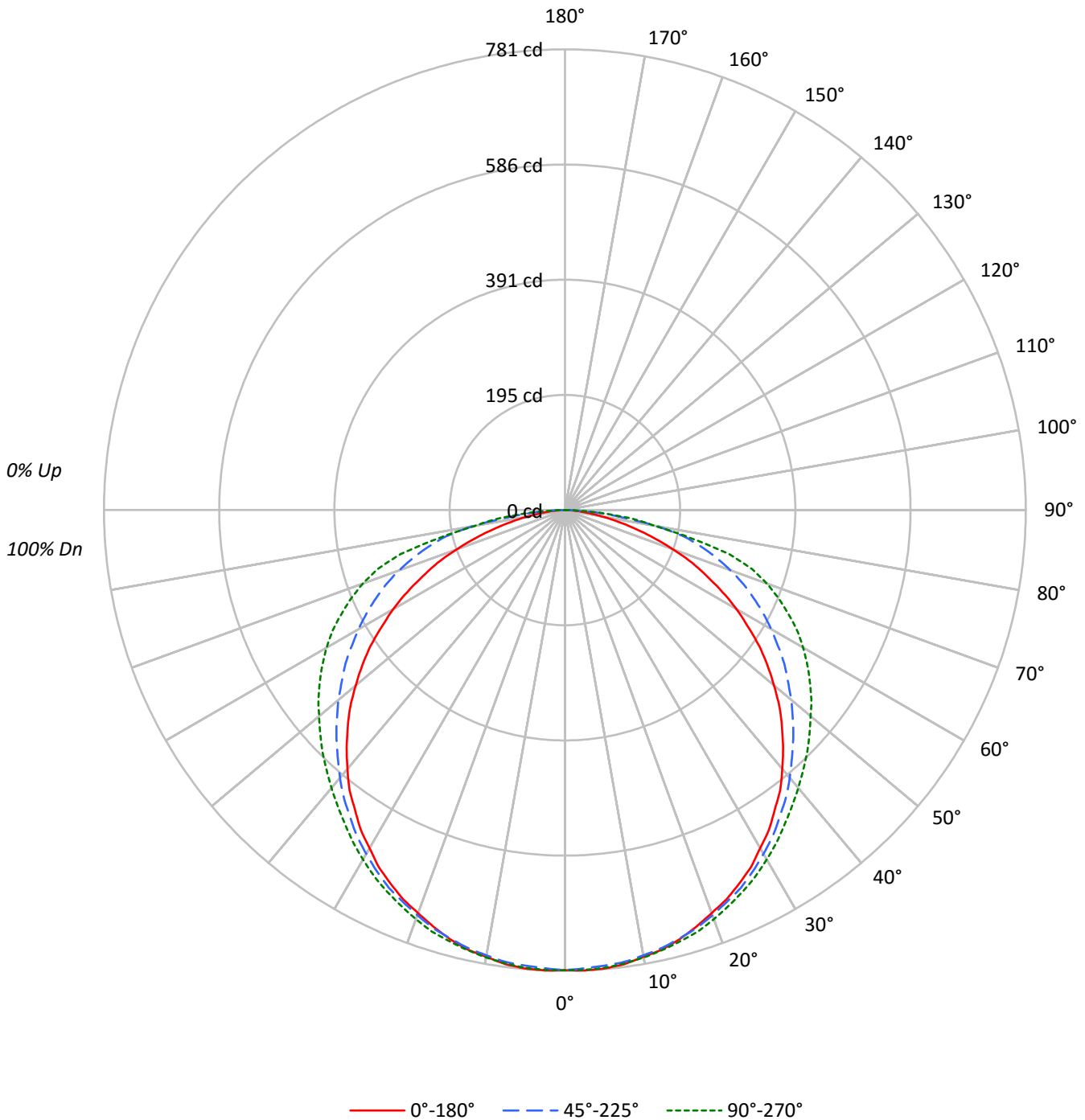
Input Watts (W): 32.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1049	1049	1049
5°	1053	1047	1052
10°	1050	1047	1052
15°	1049	1047	1054
20°	1041	1046	1057
25°	1037	1048	1059
30°	1028	1045	1063
35°	1018	1043	1067
40°	1007	1041	1080
45°	990	1042	1105
50°	968	1048	1138
55°	943	1065	1189
60°	904	1086	1255
65°	846	1124	1331
70°	769	1176	1432
75°	652	1240	1496
80°	514	1248	1210
85°	380	949	1064



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	74.0	3.0
10°-20°	212.9	8.6
20°-30°	325.6	13.1
30°-40°	398.0	16.0
40°-50°	424.2	17.1
50°-60°	405.6	16.4
60°-70°	343.6	13.9
70°-80°	230.9	9.3
80°-90°	65.1	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°	612.5	24.7
0°-40°	1010.5	40.7
0°-60°	1840.3	74.2
0°-90°	2480.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2480.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	780	780	780	780	780	
5°	780	779	775	779	779	74
15°	753	753	752	758	756	212
25°	699	701	706	712	714	322
35°	620	625	635	647	650	388
45°	520	529	547	571	581	401
55°	402	417	454	490	507	358
65°	266	293	353	400	418	264
75°	126	171	239	279	288	134
85°	25	50	62	66	69	30
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	779.9	779.9	779.9	779.9	779.9
2.5°	781.1	781.1	777.4	779.9	779.9
5°	779.9	778.7	775.0	778.7	778.7
7.5°	776.2	775.0	772.5	776.2	775.0
10°	768.8	768.8	766.4	770.0	770.0
12.5°	762.7	761.4	760.2	765.1	763.9
15°	752.8	752.8	751.6	757.7	756.5
17.5°	740.5	741.8	743.0	747.9	749.1
20°	727.0	729.5	730.7	738.1	738.1
22.5°	714.7	715.9	718.4	725.8	725.8
25°	698.7	701.2	706.1	712.2	713.5
27.5°	682.7	683.9	690.1	698.7	699.9
30°	661.8	665.5	672.9	682.7	683.9
32.5°	643.3	647.0	655.6	665.5	667.9
35°	620.0	624.9	634.7	647.0	649.5
37.5°	599.1	602.8	615.1	628.6	632.3
40°	573.2	580.6	592.9	608.9	615.1
42.5°	547.4	554.8	569.5	590.5	597.8
45°	520.3	528.9	547.4	570.8	580.6
47.5°	493.3	503.1	524.0	551.1	562.2
50°	462.5	474.8	500.7	531.4	543.7
52.5°	433.0	447.8	476.1	510.5	526.5
55°	402.2	417.0	453.9	489.6	506.8
57.5°	367.8	387.5	428.1	468.7	487.1
60°	335.8	354.3	403.5	447.8	466.2
62.5°	301.4	326.0	378.9	425.6	444.1
65°	265.7	292.8	353.0	399.8	418.2
67.5°	233.7	263.2	327.2	374.0	392.4
70°	195.6	232.5	298.9	345.7	364.1
72.5°	159.9	200.5	269.4	314.9	332.1
75°	125.5	171.0	238.6	279.2	287.8
77.5°	93.5	141.5	206.7	223.9	217.7
80°	66.4	113.2	161.1	152.5	156.2
82.5°	43.1	86.1	99.6	113.2	116.9
85°	24.6	50.4	61.5	66.4	68.9
87.5°	11.1	18.5	24.6	24.6	23.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)