

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: P310052

Luminaire Tested: **24FCZ2-40-UNV-L82765-RDP-CA125-W2A-U-4000K**

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: P310052
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-CA125-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" ACRYLIC SHEET
Light Source: (168) 4000K 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: 2476.0 lumens
Efficiency: N/A
Efficacy: 74.8 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

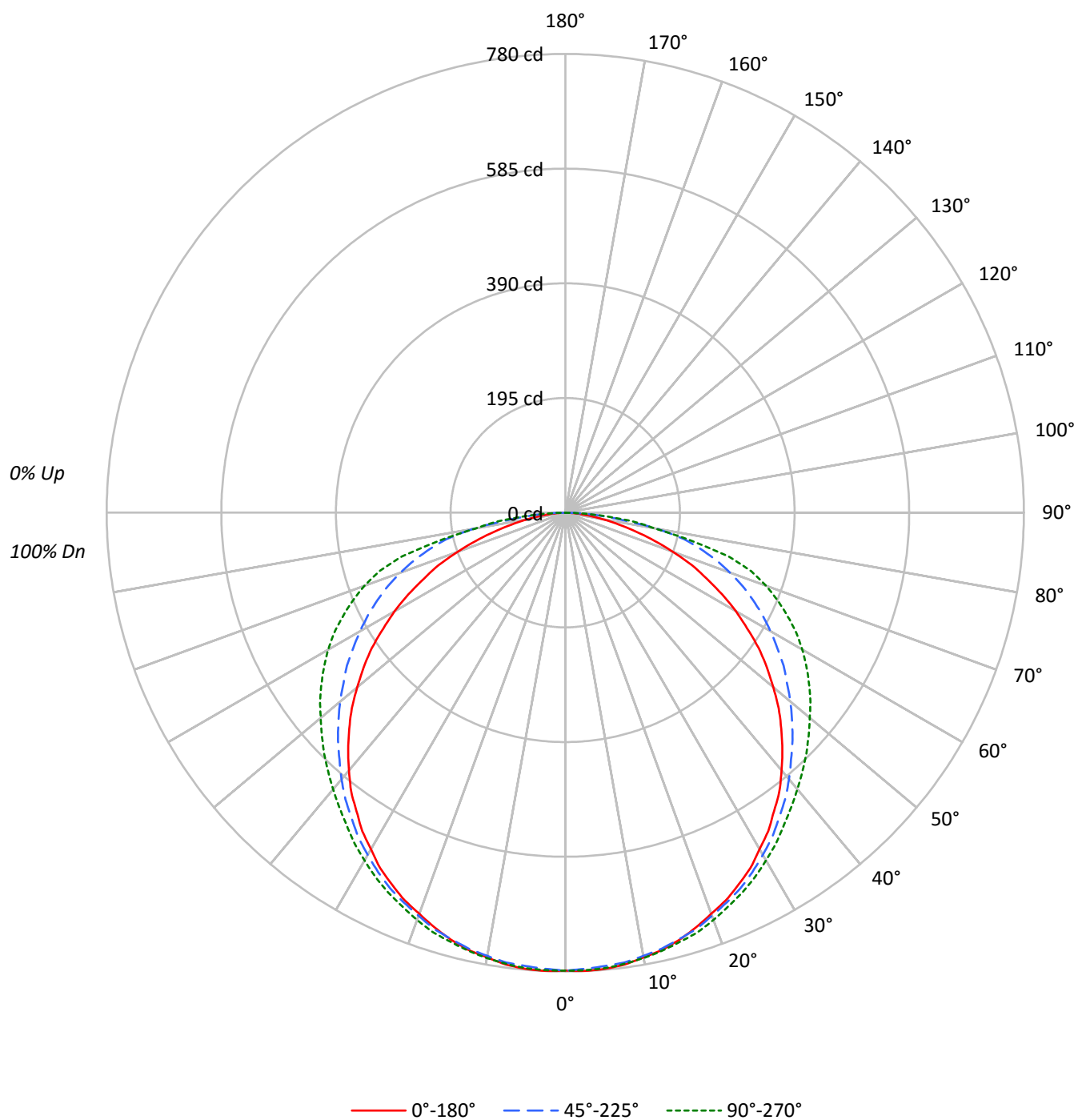
Input Watts (W): 33.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				0
RW	70	50	30	10	70	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		100
1	108	103	98	94	105	100	96	92	96	93	89		92	89	87		82
2	97	89	81	75	95	87	80	74	83	77	72		80	75	71		67
3	88	77	68	62	86	76	67	61	72	66	60		70	64	59		56
4	81	68	59	52	78	67	58	51	64	57	51		62	55	50		47
5	74	60	51	44	72	59	51	44	57	49	43		55	48	43		40
6	68	54	45	38	66	53	45	38	51	44	38		50	43	37		35
7	63	49	40	34	61	48	40	34	47	39	33		45	38	33		31
8	59	45	36	30	57	44	36	30	43	35	30		41	34	29		27
9	55	41	33	27	53	40	32	27	39	32	27		38	31	26		24
10	51	38	30	24	50	37	29	24	36	29	24		35	29	24		22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1048	1048	1048
5°	1052	1045	1050
10°	1049	1045	1050
15°	1047	1045	1052
20°	1039	1045	1055
25°	1036	1046	1057
30°	1026	1044	1061
35°	1017	1041	1065
40°	1005	1040	1079
45°	989	1040	1103
50°	967	1046	1136
55°	942	1063	1187
60°	902	1084	1253
65°	845	1122	1330
70°	768	1174	1430
75°	651	1239	1494
80°	514	1247	1209
85°	380	948	1062



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	73.9	3.0
10°-20°	212.6	8.6
20°-30°	325.1	13.1
30°-40°	397.4	16.0
40°-50°	423.5	17.1
50°-60°	405.0	16.4
60°-70°	343.1	13.9
70°-80°	230.6	9.3
80°-90°	65.0	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°	611.5	24.7
0°-40°	1008.9	40.7
0°-60°	1837.4	74.2
0°-90°	2476.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2476.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	779	779	779	779	779	
5°	779	777	774	777	777	74
15°	752	752	750	756	755	212
25°	698	700	705	711	712	322
35°	619	624	634	646	648	388
45°	520	528	546	570	580	401
55°	402	416	453	489	506	358
65°	265	292	352	399	418	263
75°	125	171	238	279	287	134
85°	25	50	61	66	69	30
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	778.6	778.6	778.6	778.6	778.6
2.5°	779.9	779.9	776.2	778.6	778.6
5°	778.6	777.4	773.7	777.4	777.4
7.5°	774.9	773.7	771.3	774.9	773.7
10°	767.6	767.6	765.1	768.8	768.8
12.5°	761.4	760.2	759.0	763.9	762.7
15°	751.6	751.6	750.4	756.5	755.3
17.5°	739.3	740.6	741.8	746.7	747.9
20°	725.8	728.3	729.5	736.9	736.9
22.5°	713.5	714.8	717.2	724.6	724.6
25°	697.6	700.0	704.9	711.1	712.3
27.5°	681.6	682.8	689.0	697.6	698.8
30°	660.7	664.4	671.8	681.6	682.8
32.5°	642.3	646.0	654.6	664.4	666.9
35°	619.0	623.9	633.7	646.0	648.5
37.5°	598.1	601.8	614.1	627.6	631.3
40°	572.3	579.7	592.0	607.9	614.1
42.5°	546.5	553.9	568.6	589.5	596.9
45°	519.5	528.1	546.5	569.9	579.7
47.5°	492.5	502.3	523.2	550.2	561.3
50°	461.8	474.1	499.8	530.6	542.8
52.5°	432.3	447.0	475.3	509.7	525.6
55°	401.6	416.3	453.2	488.8	506.0
57.5°	367.2	386.9	427.4	467.9	486.3
60°	335.3	353.7	402.8	447.0	465.5
62.5°	300.9	325.5	378.3	424.9	443.4
65°	265.3	292.3	352.5	399.1	417.6
67.5°	233.3	262.8	326.7	373.4	391.8
70°	195.3	232.1	298.4	345.1	363.5
72.5°	159.7	200.2	269.0	314.4	331.6
75°	125.3	170.7	238.3	278.8	287.4
77.5°	93.3	141.2	206.3	223.5	217.4
80°	66.3	113.0	160.9	152.3	156.0
82.5°	43.0	86.0	99.5	113.0	116.7
85°	24.6	50.4	61.4	66.3	68.8
87.5°	11.1	18.4	24.6	24.6	23.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)