

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: P313542

Luminaire Tested: **24FCZ2-40-UNV-L83050-RDP-CA08-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: P313542
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-CA08-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" 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: 2614.0 lumens
Efficiency: N/A
Efficacy: 78.0 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

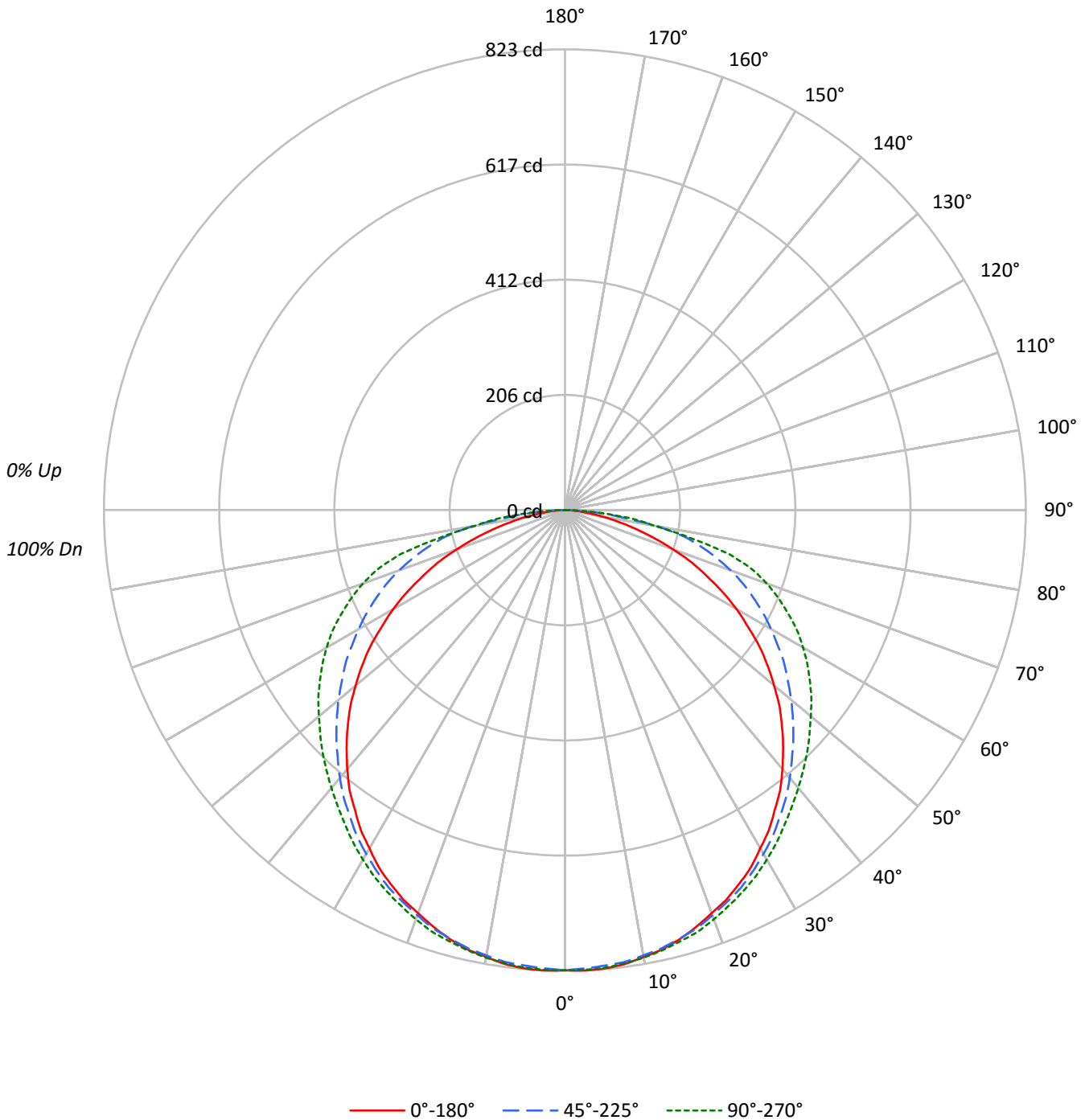
Input Watts (W): 33.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1106	1106	1106
5°	1110	1103	1108
10°	1107	1104	1109
15°	1105	1103	1111
20°	1097	1103	1114
25°	1093	1105	1116
30°	1084	1102	1120
35°	1073	1099	1124
40°	1061	1098	1139
45°	1044	1098	1165
50°	1020	1105	1200
55°	995	1122	1253
60°	953	1144	1322
65°	892	1185	1403
70°	811	1240	1510
75°	688	1307	1577
80°	542	1316	1276
85°	400	1000	1121



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	78.0	3.0
10°-20°	224.4	8.6
20°-30°	343.2	13.1
30°-40°	419.5	16.0
40°-50°	447.1	17.1
50°-60°	427.5	16.4
60°-70°	362.2	13.9
70°-80°	243.4	9.3
80°-90°	68.7	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°	645.6	24.7
0°-40°	1065.1	40.7
0°-60°	1939.8	74.2
0°-90°	2614.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2614.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	822	822	822	822	822	
5°	822	821	817	821	821	78
15°	794	794	792	799	797	224
25°	736	739	744	751	752	339
35°	654	659	669	682	685	409
45°	548	558	577	602	612	423
55°	424	440	478	516	534	378
65°	280	309	372	421	441	278
75°	132	180	252	294	303	142
85°	26	53	65	70	73	32
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	822.0	822.0	822.0	822.0	822.0
2.5°	823.3	823.3	819.4	822.0	822.0
5°	822.0	820.7	816.8	820.7	820.7
7.5°	818.1	816.8	814.2	818.1	816.8
10°	810.4	810.4	807.8	811.7	811.7
12.5°	803.9	802.6	801.3	806.5	805.2
15°	793.5	793.5	792.2	798.7	797.4
17.5°	780.5	781.8	783.1	788.3	789.6
20°	766.3	768.9	770.2	777.9	777.9
22.5°	753.3	754.6	757.2	765.0	765.0
25°	736.5	739.0	744.2	750.7	752.0
27.5°	719.6	720.9	727.4	736.5	737.8
30°	697.6	701.4	709.2	719.6	720.9
32.5°	678.1	682.0	691.1	701.4	704.0
35°	653.5	658.7	669.0	682.0	684.6
37.5°	631.4	635.3	648.3	662.5	666.4
40°	604.2	612.0	624.9	641.8	648.3
42.5°	577.0	584.8	600.3	622.4	630.1
45°	548.5	557.5	577.0	601.6	612.0
47.5°	519.9	530.3	552.3	580.9	592.5
50°	487.5	500.5	527.7	560.1	573.1
52.5°	456.4	472.0	501.8	538.1	554.9
55°	424.0	439.5	478.4	516.0	534.2
57.5°	387.7	408.4	451.2	494.0	513.4
60°	354.0	373.4	425.3	472.0	491.4
62.5°	317.7	343.6	399.3	448.6	468.1
65°	280.1	308.6	372.1	421.4	440.8
67.5°	246.3	277.5	344.9	394.2	413.6
70°	206.2	245.1	315.1	364.3	383.8
72.5°	168.6	211.3	283.9	331.9	350.1
75°	132.3	180.2	251.5	294.3	303.4
77.5°	98.5	149.1	217.8	236.0	229.5
80°	70.0	119.3	169.9	160.8	164.7
82.5°	45.4	90.8	105.0	119.3	123.2
85°	25.9	53.2	64.8	70.0	72.6
87.5°	11.7	19.4	25.9	25.9	24.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)