

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: P310048

Luminaire Tested: **24FCZ2-40-UNV-L82765-RDP-CA08-W2A-U-6500K**

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: P310048
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-CA08-W2A-U-6500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" ACRYLIC SHEET
Light Source: (168) 6500K 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: 2602.0 lumens
Efficiency: N/A
Efficacy: 76.1 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

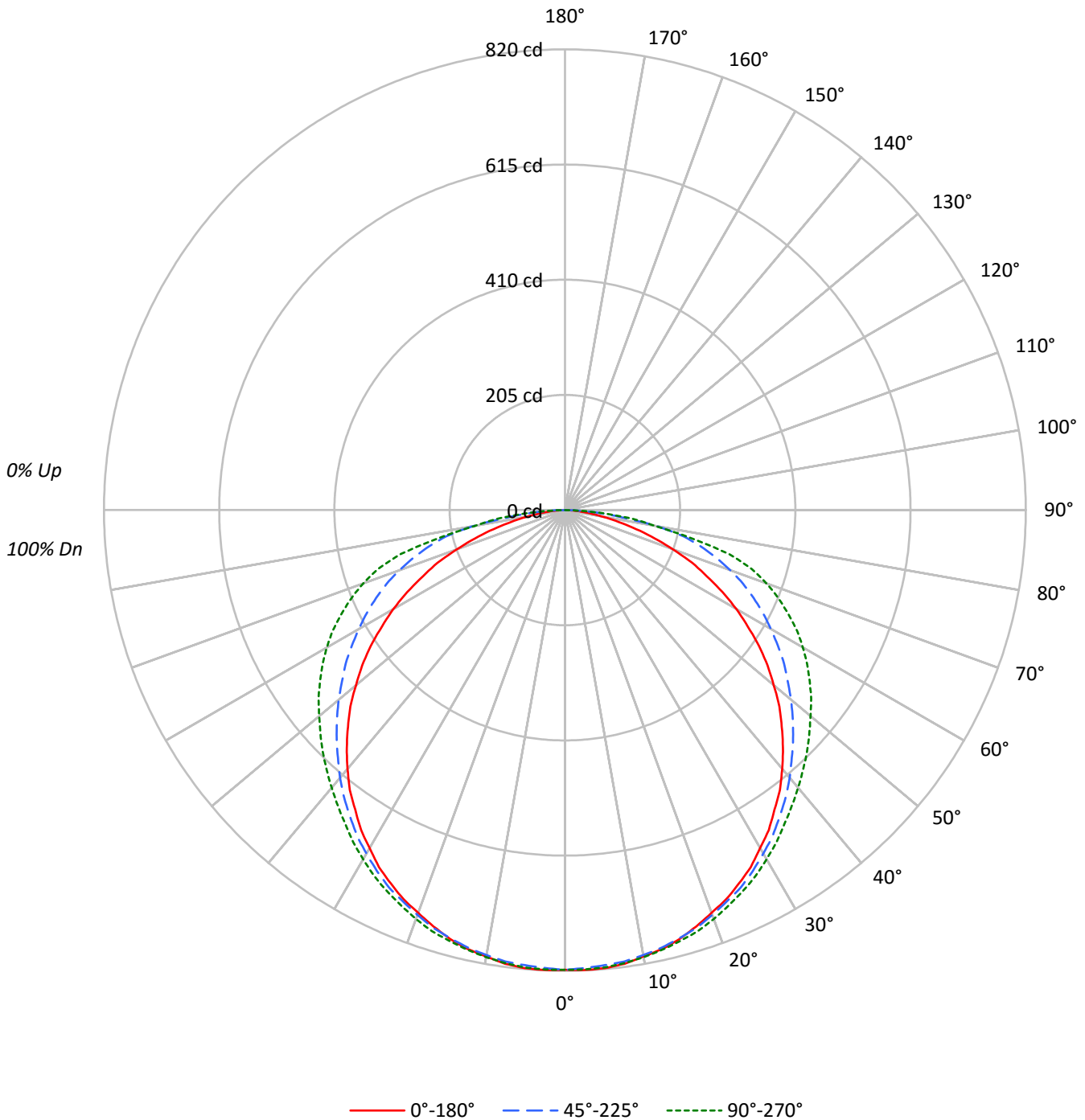
Input Watts (W): 34.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				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	68	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°	1101	1101	1101
5°	1105	1098	1103
10°	1102	1099	1104
15°	1100	1098	1106
20°	1092	1098	1109
25°	1088	1100	1111
30°	1079	1097	1115
35°	1068	1094	1119
40°	1056	1093	1133
45°	1039	1093	1159
50°	1016	1100	1194
55°	990	1117	1247
60°	948	1139	1316
65°	888	1179	1397
70°	807	1234	1503
75°	684	1302	1570
80°	540	1310	1270
85°	398	996	1116



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	77.6	3.0
10°-20°	223.4	8.6
20°-30°	341.6	13.1
30°-40°	417.6	16.0
40°-50°	445.1	17.1
50°-60°	425.6	16.4
60°-70°	360.5	13.9
70°-80°	242.3	9.3
80°-90°	68.3	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°	642.6	24.7
0°-40°	1060.2	40.7
0°-60°	1930.9	74.2
0°-90°	2602.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2602.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	818	818	818	818	818	
5°	818	817	813	817	817	78
15°	790	790	789	795	794	223
25°	733	736	741	747	749	338
35°	650	656	666	679	681	407
45°	546	555	574	599	609	421
55°	422	438	476	514	532	376
65°	279	307	370	420	439	277
75°	132	179	250	293	302	141
85°	26	53	64	70	72	32
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	818.3	818.3	818.3	818.3	818.3
2.5°	819.5	819.5	815.7	818.3	818.3
5°	818.3	817.0	813.1	817.0	817.0
7.5°	814.4	813.1	810.5	814.4	813.1
10°	806.6	806.6	804.1	807.9	807.9
12.5°	800.2	798.9	797.6	802.8	801.5
15°	789.9	789.9	788.6	795.0	793.7
17.5°	777.0	778.2	779.5	784.7	786.0
20°	762.8	765.3	766.6	774.4	774.4
22.5°	749.9	751.1	753.7	761.5	761.5
25°	733.1	735.7	740.8	747.3	748.6
27.5°	716.3	717.6	724.0	733.1	734.4
30°	694.4	698.2	706.0	716.3	717.6
32.5°	675.0	678.9	687.9	698.2	700.8
35°	650.5	655.6	666.0	678.9	681.4
37.5°	628.5	632.4	645.3	659.5	663.4
40°	601.4	609.2	622.1	638.9	645.3
42.5°	574.3	582.1	597.6	619.5	627.2
45°	545.9	555.0	574.3	598.8	609.2
47.5°	517.5	527.9	549.8	578.2	589.8
50°	485.3	498.2	525.3	557.5	570.5
52.5°	454.3	469.8	499.5	535.6	552.4
55°	422.0	437.5	476.2	513.7	531.7
57.5°	385.9	406.5	449.1	491.7	511.1
60°	352.3	371.7	423.3	469.8	489.1
62.5°	316.2	342.0	397.5	446.6	465.9
65°	278.8	307.2	370.4	419.5	438.8
67.5°	245.2	276.2	343.3	392.3	411.7
70°	205.2	243.9	313.6	362.7	382.0
72.5°	167.8	210.4	282.6	330.4	348.5
75°	131.6	179.4	250.4	293.0	302.0
77.5°	98.1	148.4	216.8	234.9	228.4
80°	69.7	118.7	169.1	160.0	163.9
82.5°	45.2	90.3	104.5	118.7	122.6
85°	25.8	52.9	64.5	69.7	72.3
87.5°	11.6	19.4	25.8	25.8	24.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)