

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: P310753

Luminaire Tested: **24FCZ2-40-UNV-L82765-CP250-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: P310753
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-15)
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-CP250-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.250" 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: 3355.0 lumens
Efficiency: N/A
Efficacy: 102.0 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

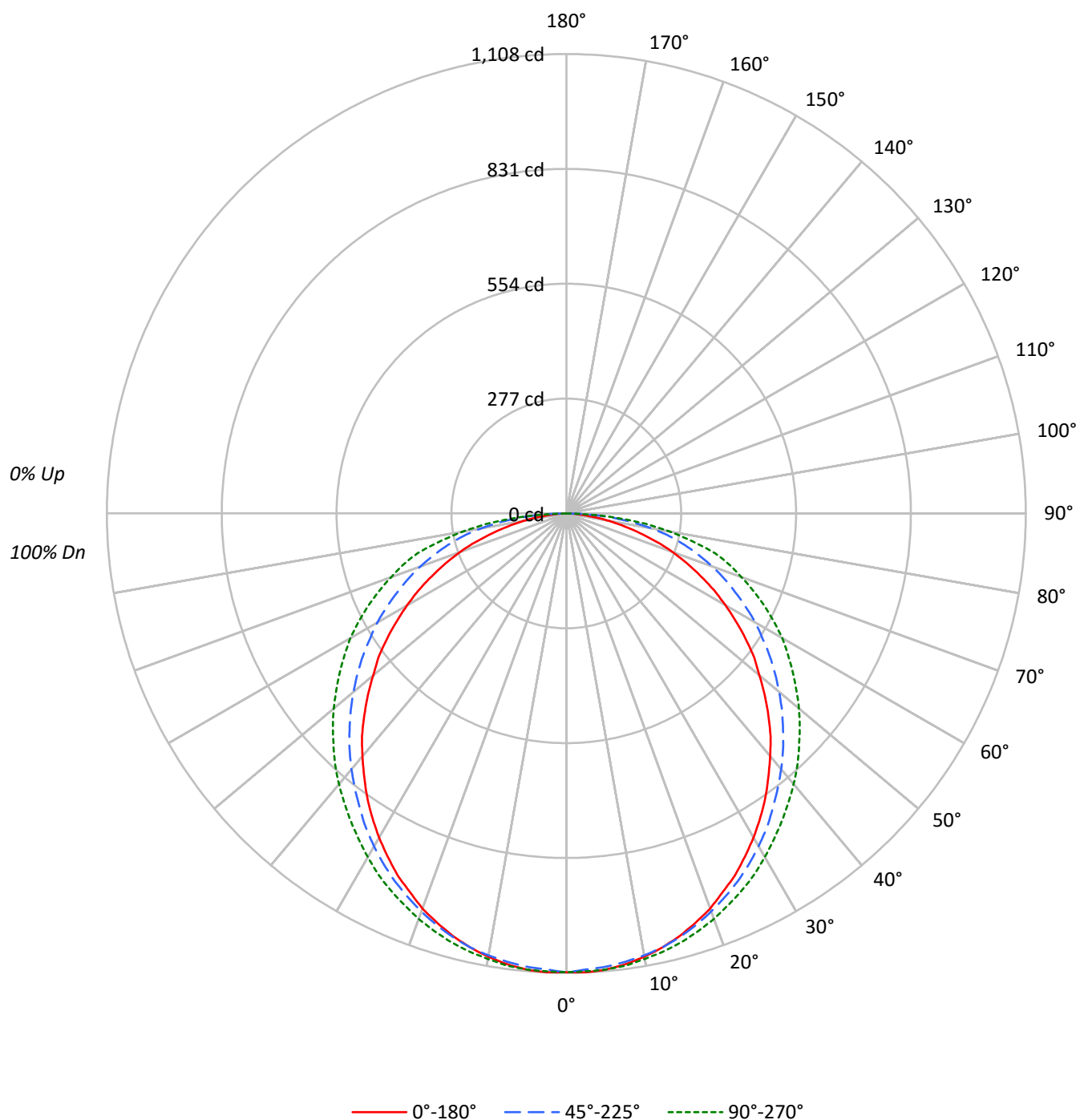
Input Watts (W): 32.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	92	89		92	89	87		82
2	98	89	81	75	95	87	80	74	83	78	73		80	75	71		67
3	89	77	69	62	86	76	68	61	73	66	60		70	64	59		56
4	81	68	59	52	79	67	58	52	64	57	51		62	56	50		47
5	74	61	52	45	72	60	51	44	58	50	44		56	49	43		41
6	69	55	46	39	67	54	45	39	52	44	38		50	43	38		36
7	64	50	41	34	62	49	40	34	47	39	34		46	39	34		31
8	59	45	37	31	57	45	36	30	43	36	30		42	35	30		28
9	55	41	33	27	54	41	33	27	40	32	27		39	32	27		25
10	52	38	30	25	50	38	30	25	37	30	25		36	29	25		23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1489	1489	1489
5°	1491	1482	1491
10°	1483	1478	1490
15°	1470	1473	1492
20°	1452	1463	1490
25°	1430	1453	1489
30°	1402	1441	1487
35°	1375	1426	1488
40°	1343	1415	1498
45°	1311	1406	1510
50°	1272	1403	1533
55°	1240	1405	1564
60°	1192	1417	1618
65°	1138	1432	1676
70°	1077	1476	1769
75°	961	1539	1933
80°	819	1630	1975
85°	584	1615	1890



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	104.7	3.1
10°-20°	299.4	8.9
20°-30°	452.2	13.5
30°-40°	545.0	16.2
40°-50°	572.2	17.1
50°-60°	535.3	16.0
60°-70°	442.1	13.2
70°-80°	301.2	9.0
80°-90°	102.7	3.1
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°	856.4	25.5
0°-40°	1401.4	41.8
0°-60°	2508.9	74.8
0°-90°	3355.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3355.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1106	1106	1106	1106	1106	
5°	1104	1103	1098	1104	1104	105
15°	1055	1056	1058	1069	1071	297
25°	963	967	978	997	1003	443
35°	837	846	868	897	906	523
45°	689	704	739	779	794	531
55°	529	550	599	648	667	472
65°	357	387	450	506	526	354
75°	185	227	296	352	372	197
85°	38	75	105	118	122	47
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1106.4	1106.4	1106.4	1106.4	1106.4
2.5°	1107.6	1106.4	1100.9	1106.4	1105.3
5°	1104.2	1103.1	1097.5	1104.2	1104.2
7.5°	1096.4	1096.4	1090.9	1098.7	1099.8
10°	1085.3	1085.3	1082.0	1090.9	1090.9
12.5°	1071.9	1071.9	1071.9	1080.8	1082.0
15°	1055.2	1056.4	1057.5	1068.6	1070.8
17.5°	1035.2	1037.4	1040.8	1054.1	1056.4
20°	1014.1	1016.3	1021.9	1037.4	1040.8
22.5°	987.3	992.9	1000.7	1018.5	1021.9
25°	962.9	967.3	978.4	997.4	1002.9
27.5°	932.8	939.5	954.0	974.0	981.8
30°	902.7	909.4	927.2	950.6	957.3
32.5°	870.5	880.5	899.4	923.9	931.7
35°	837.1	846.0	868.2	897.2	906.1
37.5°	800.3	812.6	837.1	868.2	879.4
40°	764.7	778.1	805.9	839.3	852.7
42.5°	729.1	742.5	773.6	811.5	824.8
45°	689.0	703.5	739.1	779.2	793.7
47.5°	649.0	666.8	705.7	748.0	763.6
50°	607.8	627.8	670.1	714.6	732.4
52.5°	571.0	590.0	634.5	682.3	699.0
55°	528.7	549.9	598.9	647.8	666.8
57.5°	485.3	508.7	561.0	614.4	633.4
60°	443.0	468.6	526.5	579.9	601.1
62.5°	401.8	427.4	487.6	543.2	564.4
65°	357.3	387.4	449.7	506.5	526.5
67.5°	315.0	347.3	413.0	468.6	488.7
70°	273.8	305.0	375.1	429.7	449.7
72.5°	229.3	264.9	335.1	391.8	413.0
75°	184.8	227.1	296.1	351.7	371.8
77.5°	143.6	187.0	256.0	301.7	311.7
80°	105.7	150.3	210.4	242.7	254.9
82.5°	67.9	112.4	160.3	183.7	193.7
85°	37.8	74.6	104.6	118.0	122.4
87.5°	15.6	32.3	42.3	47.9	47.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)