

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: P310715

Luminaire Tested: **24FCZ2-40-UNV-L82765-CA08-W2A-U-2700K**

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: P310715
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-CA08-W2A-U-2700K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.08" ACRYLIC SHEET
Light Source: (168) 2700K 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: 3396.0 lumens
Efficiency: N/A
Efficacy: 103.9 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

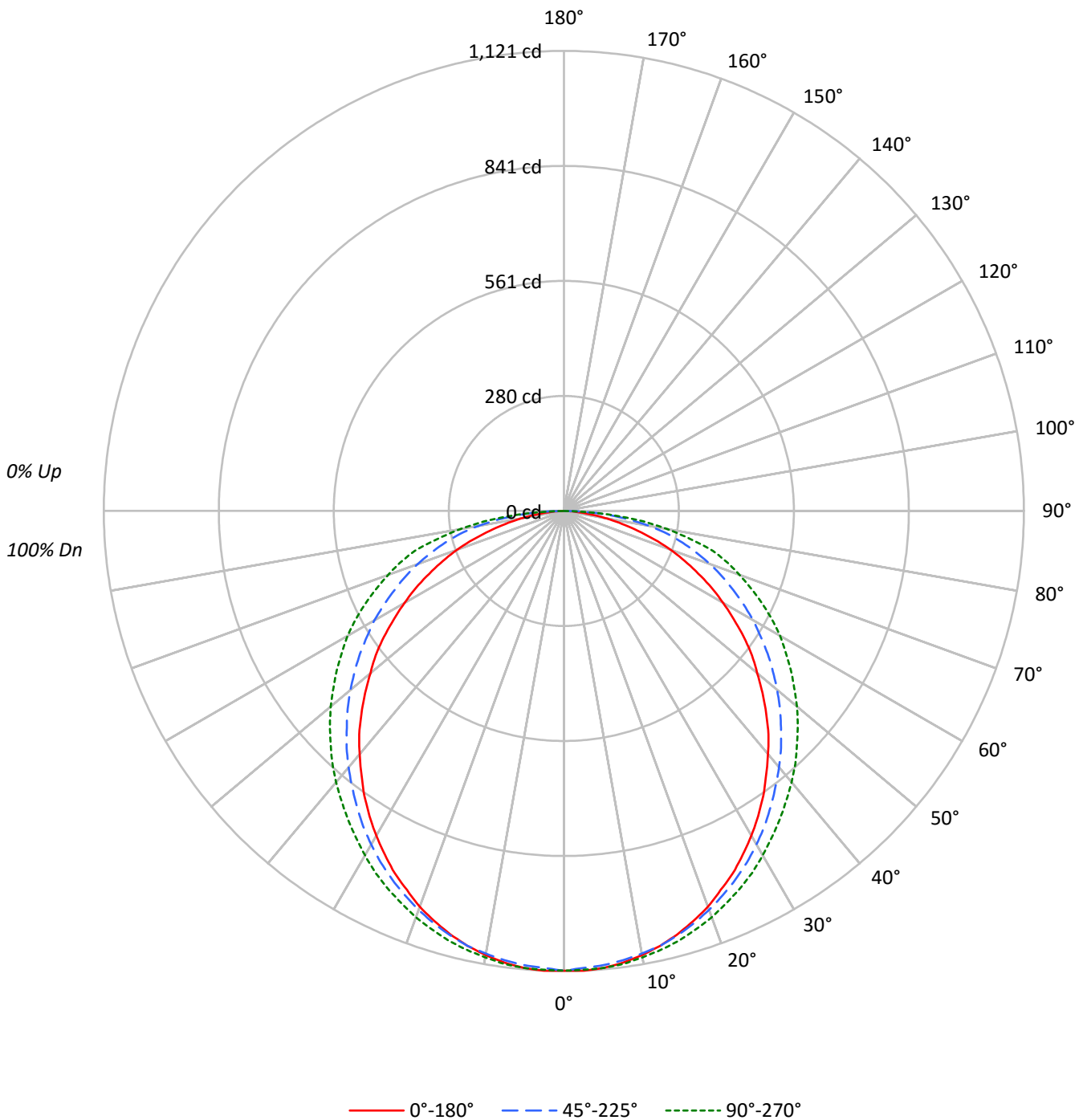
Input Watts (W): 32.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	92	89	92	89	87	88	86	84	82
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	79	67	58	52	64	57	51	62	56	50	60	54	50	47
5	74	61	52	45	72	60	51	44	58	50	44	56	49	43	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	64	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	37	31	57	45	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1507	1507	1507
5°	1510	1501	1510
10°	1501	1496	1509
15°	1488	1491	1510
20°	1470	1481	1508
25°	1447	1470	1507
30°	1420	1458	1505
35°	1392	1444	1507
40°	1360	1433	1516
45°	1327	1423	1529
50°	1288	1420	1552
55°	1255	1422	1583
60°	1207	1434	1637
65°	1152	1449	1697
70°	1090	1494	1791
75°	972	1558	1956
80°	829	1650	1999
85°	591	1635	1913



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	106.0	3.1
10°-20°	303.1	8.9
20°-30°	457.8	13.5
30°-40°	551.7	16.2
40°-50°	579.2	17.1
50°-60°	541.9	16.0
60°-70°	447.5	13.2
70°-80°	304.9	9.0
80°-90°	104.0	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°	866.8	25.5
0°-40°	1418.5	41.8
0°-60°	2539.6	74.8
0°-90°	3396.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3396.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1120	1120	1120	1120	1120	
5°	1118	1117	1111	1118	1118	106
15°	1068	1069	1070	1082	1084	301
25°	975	979	990	1010	1015	448
35°	847	856	879	908	917	529
45°	697	712	748	789	803	538
55°	535	557	606	656	675	478
65°	362	392	455	513	533	359
75°	187	230	300	356	376	199
85°	38	76	106	119	124	48
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1120.0	1120.0	1120.0	1120.0	1120.0
2.5°	1121.1	1120.0	1114.3	1120.0	1118.8
5°	1117.7	1116.6	1111.0	1117.7	1117.7
7.5°	1109.8	1109.8	1104.2	1112.1	1113.2
10°	1098.6	1098.6	1095.2	1104.2	1104.2
12.5°	1085.0	1085.0	1085.0	1094.1	1095.2
15°	1068.1	1069.3	1070.4	1081.7	1083.9
17.5°	1047.9	1050.1	1053.5	1067.0	1069.3
20°	1026.5	1028.7	1034.3	1050.1	1053.5
22.5°	999.4	1005.0	1012.9	1031.0	1034.3
25°	974.6	979.1	990.4	1009.6	1015.2
27.5°	944.2	951.0	965.6	985.9	993.8
30°	913.8	920.5	938.6	962.2	969.0
32.5°	881.1	891.2	910.4	935.2	943.1
35°	847.3	856.3	878.9	908.1	917.2
37.5°	810.1	822.5	847.3	878.9	890.1
40°	774.1	787.6	815.8	849.6	863.1
42.5°	738.0	751.5	783.1	821.4	834.9
45°	697.4	712.1	748.1	788.7	803.4
47.5°	656.9	674.9	714.3	757.2	772.9
50°	615.2	635.5	678.3	723.4	741.4
52.5°	578.0	597.2	642.2	690.7	707.6
55°	535.2	556.6	606.2	655.8	674.9
57.5°	491.3	514.9	567.9	622.0	641.1
60°	448.4	474.4	532.9	587.0	608.4
62.5°	406.8	432.7	493.5	549.8	571.3
65°	361.7	392.1	455.2	512.7	532.9
67.5°	318.9	351.5	418.0	474.4	494.6
70°	277.2	308.7	379.7	434.9	455.2
72.5°	232.1	268.2	339.1	396.6	418.0
75°	187.0	229.9	299.7	356.0	376.3
77.5°	145.3	189.3	259.1	305.3	315.5
80°	107.0	152.1	213.0	245.6	258.0
82.5°	68.7	113.8	162.2	185.9	196.1
85°	38.3	75.5	105.9	119.4	123.9
87.5°	15.8	32.7	42.8	48.4	48.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)