

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: P313918

Luminaire Tested: **24FCZ2-40-UNV-L83050-CA08-W2A-U-4500K**

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: P313918
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-L83050-CA08-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.08" ACRYLIC SHEET
Light Source: (168) 4500K 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: 3923.0 lumens
Efficiency: N/A
Efficacy: 114.4 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

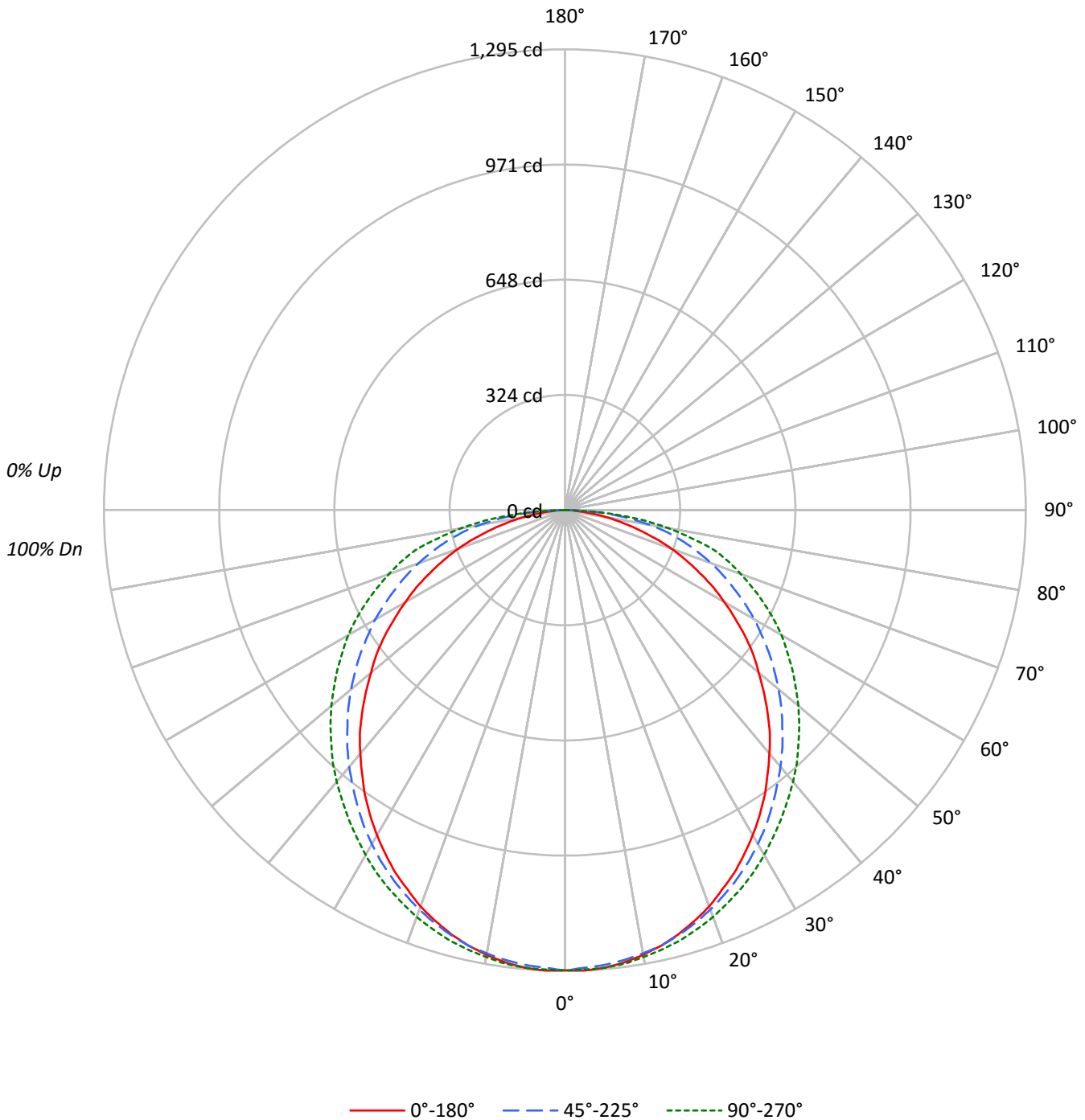
Input Watts (W): 34.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1741	1741	1741
5°	1744	1733	1744
10°	1734	1728	1743
15°	1719	1722	1744
20°	1698	1711	1743
25°	1671	1699	1741
30°	1640	1684	1739
35°	1608	1668	1740
40°	1571	1655	1751
45°	1533	1644	1766
50°	1488	1640	1793
55°	1450	1643	1829
60°	1394	1657	1891
65°	1330	1674	1960
70°	1260	1725	2068
75°	1123	1800	2260
80°	958	1906	2310
85°	684	1888	2211



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	122.4	3.1
10°-20°	350.1	8.9
20°-30°	528.8	13.5
30°-40°	637.3	16.2
40°-50°	669.1	17.1
50°-60°	626.0	16.0
60°-70°	516.9	13.2
70°-80°	352.2	9.0
80°-90°	120.1	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°	1001.3	25.5
0°-40°	1638.7	41.8
0°-60°	2933.7	74.8
0°-90°	3923.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3923.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1294	1294	1294	1294	1294	
5°	1291	1290	1283	1291	1291	123
15°	1234	1235	1236	1250	1252	348
25°	1126	1131	1144	1166	1173	518
35°	979	989	1015	1049	1060	612
45°	806	823	864	911	928	621
55°	618	643	700	758	780	552
65°	418	453	526	592	616	414
75°	216	266	346	411	435	230
85°	44	87	122	138	143	55
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1293.8	1293.8	1293.8	1293.8	1293.8
2.5°	1295.1	1293.8	1287.3	1293.8	1292.5
5°	1291.2	1289.9	1283.4	1291.2	1291.2
7.5°	1282.1	1282.1	1275.5	1284.7	1286.0
10°	1269.0	1269.0	1265.1	1275.5	1275.5
12.5°	1253.4	1253.4	1253.4	1263.8	1265.1
15°	1233.9	1235.2	1236.5	1249.5	1252.1
17.5°	1210.5	1213.1	1217.0	1232.6	1235.2
20°	1185.7	1188.3	1194.9	1213.1	1217.0
22.5°	1154.5	1161.0	1170.1	1190.9	1194.9
25°	1125.9	1131.1	1144.1	1166.2	1172.7
27.5°	1090.7	1098.5	1115.5	1138.9	1148.0
30°	1055.6	1063.4	1084.2	1111.5	1119.4
32.5°	1017.8	1029.6	1051.7	1080.3	1089.4
35°	978.8	989.2	1015.2	1049.1	1059.5
37.5°	935.8	950.2	978.8	1015.2	1028.2
40°	894.2	909.8	942.3	981.4	997.0
42.5°	852.5	868.2	904.6	948.9	964.5
45°	805.7	822.6	864.2	911.1	928.0
47.5°	758.8	779.6	825.2	874.7	892.9
50°	710.7	734.1	783.6	835.6	856.4
52.5°	667.7	689.8	741.9	797.9	817.4
55°	618.3	643.0	700.3	757.5	779.6
57.5°	567.5	594.8	656.0	718.5	740.6
60°	518.0	548.0	615.6	678.1	702.9
62.5°	469.9	499.8	570.1	635.2	659.9
65°	417.8	453.0	525.8	592.2	615.6
67.5°	368.3	406.1	482.9	548.0	571.4
70°	320.2	356.6	438.6	502.4	525.8
72.5°	268.1	309.8	391.8	458.2	482.9
75°	216.1	265.5	346.2	411.3	434.7
77.5°	167.9	218.7	299.4	352.7	364.4
80°	123.7	175.7	246.0	283.7	298.1
82.5°	79.4	131.5	187.4	214.8	226.5
85°	44.3	87.2	122.3	138.0	143.2
87.5°	18.2	37.7	49.5	56.0	56.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)