

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: P313926

Luminaire Tested: **24FCZ2-40-UNV-L83050-CP125-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: P313926
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-CP125-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" 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: 3616.0 lumens
Efficiency: N/A
Efficacy: 110.6 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

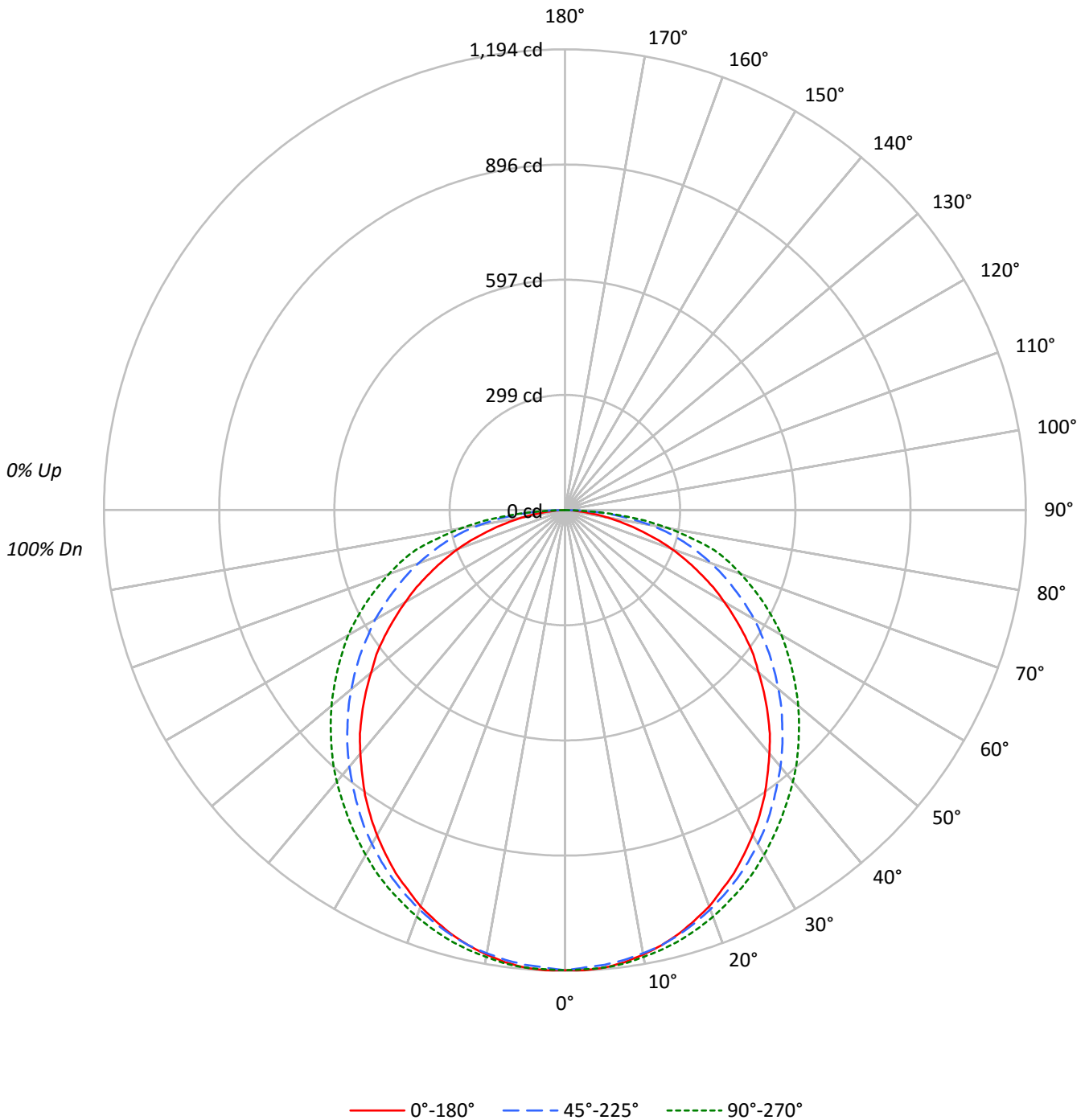
Input Watts (W): 32.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1604	1604	1604
5°	1607	1598	1607
10°	1598	1593	1606
15°	1584	1588	1608
20°	1565	1577	1606
25°	1541	1566	1605
30°	1512	1553	1603
35°	1482	1537	1604
40°	1448	1526	1614
45°	1413	1516	1628
50°	1371	1512	1652
55°	1337	1514	1686
60°	1285	1527	1743
65°	1226	1543	1807
70°	1161	1590	1907
75°	1036	1659	2083
80°	883	1757	2128
85°	630	1741	2038



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	112.9	3.1
10°-20°	322.7	8.9
20°-30°	487.4	13.5
30°-40°	587.5	16.2
40°-50°	616.7	17.1
50°-60°	577.0	16.0
60°-70°	476.5	13.2
70°-80°	324.7	9.0
80°-90°	110.7	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°	923.0	25.5
0°-40°	1510.4	41.8
0°-60°	2704.1	74.8
0°-90°	3616.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3616.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1192	1192	1192	1192	1192	
5°	1190	1189	1183	1190	1190	113
15°	1137	1138	1140	1152	1154	321
25°	1038	1043	1055	1075	1081	477
35°	902	912	936	967	977	564
45°	743	758	797	840	855	573
55°	570	593	646	698	719	509
65°	385	418	485	546	568	382
75°	199	245	319	379	401	212
85°	41	80	113	127	132	51
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1192.5	1192.5	1192.5	1192.5	1192.5
2.5°	1193.7	1192.5	1186.5	1192.5	1191.3
5°	1190.1	1188.9	1182.9	1190.1	1190.1
7.5°	1181.7	1181.7	1175.7	1184.1	1185.3
10°	1169.7	1169.7	1166.1	1175.7	1175.7
12.5°	1155.3	1155.3	1155.3	1164.9	1166.1
15°	1137.3	1138.5	1139.7	1151.7	1154.1
17.5°	1115.7	1118.1	1121.7	1136.1	1138.5
20°	1092.9	1095.3	1101.3	1118.1	1121.7
22.5°	1064.2	1070.2	1078.6	1097.7	1101.3
25°	1037.8	1042.6	1054.6	1075.0	1081.0
27.5°	1005.4	1012.6	1028.2	1049.8	1058.2
30°	973.0	980.2	999.4	1024.6	1031.8
32.5°	938.2	949.0	969.4	995.8	1004.2
35°	902.2	911.8	935.8	967.0	976.6
37.5°	862.6	875.8	902.2	935.8	947.8
40°	824.2	838.6	868.6	904.6	919.0
42.5°	785.8	800.2	833.8	874.6	889.0
45°	742.6	758.2	796.6	839.8	855.4
47.5°	699.4	718.6	760.6	806.2	823.0
50°	655.0	676.6	722.2	770.2	789.4
52.5°	615.5	635.9	683.8	735.4	753.4
55°	569.9	592.7	645.5	698.2	718.6
57.5°	523.1	548.3	604.7	662.2	682.6
60°	477.5	505.1	567.5	625.1	647.9
62.5°	433.1	460.7	525.5	585.5	608.3
65°	385.1	417.5	484.7	545.9	567.5
67.5°	339.5	374.3	445.1	505.1	526.7
70°	295.1	328.7	404.3	463.1	484.7
72.5°	247.1	285.5	361.1	422.3	445.1
75°	199.2	244.7	319.1	379.1	400.7
77.5°	154.8	201.6	275.9	325.1	335.9
80°	114.0	162.0	226.7	261.5	274.7
82.5°	73.2	121.2	172.8	198.0	208.8
85°	40.8	80.4	112.8	127.2	132.0
87.5°	16.8	34.8	45.6	51.6	51.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)