

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: P310728

Luminaire Tested: **24FCZ2-40-UNV-L82765-CA125-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: P310728
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-CA125-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" 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: 3746.0 lumens
Efficiency: N/A
Efficacy: 112.5 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

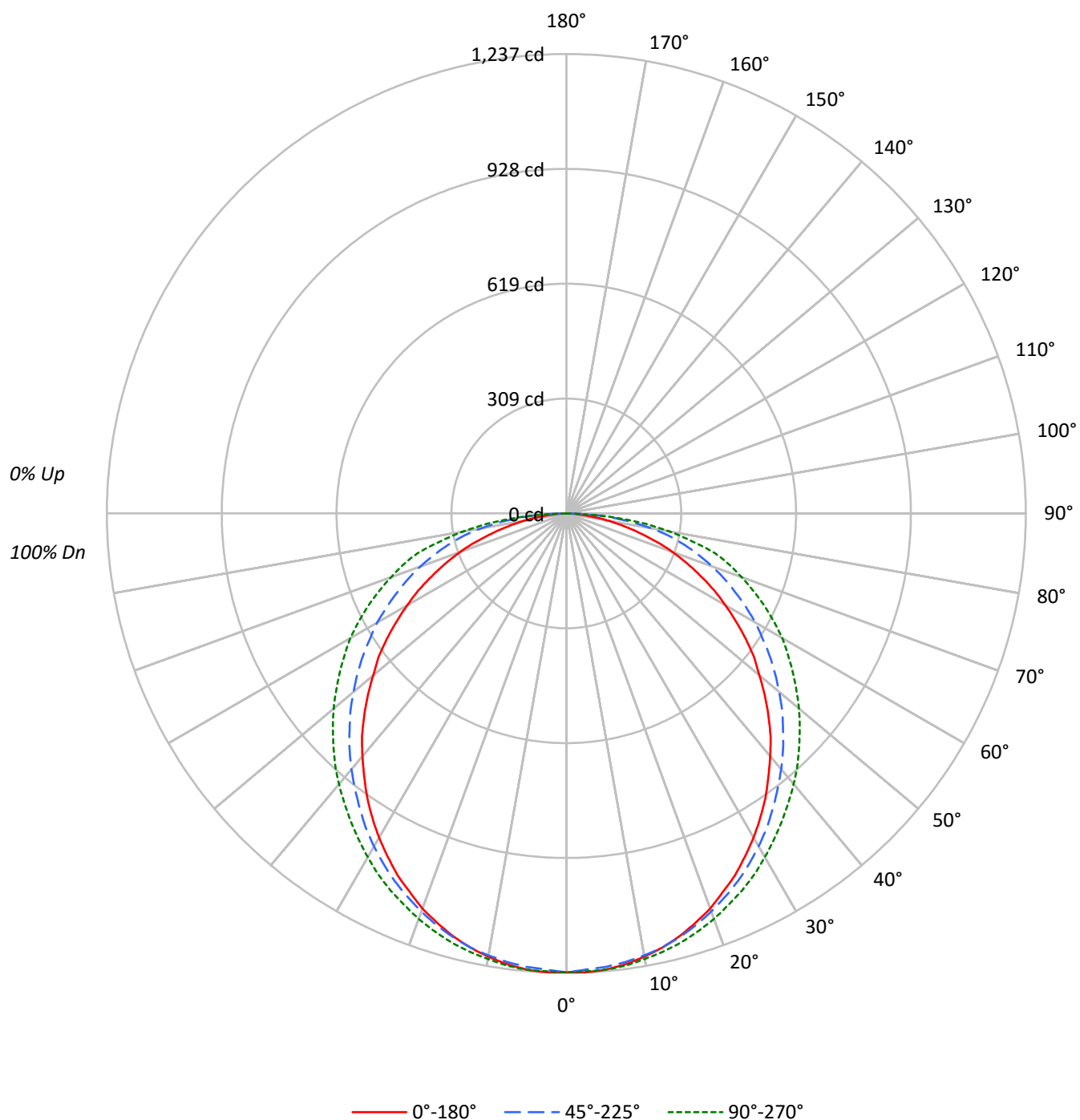
Input Watts (W): 33.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P310728

CATALOG NUMBER: 24FCZ2-40-UNV-L82765-CA125-W2A-U-4500K

Luminous Intensity Polar Plot





TEST NUMBER: P310728

CATALOG NUMBER: 24FCZ2-40-UNV-L82765-CA125-W2A-U-4500K

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°	1662	1662	1662
5°	1665	1655	1665
10°	1656	1651	1664
15°	1641	1645	1665
20°	1621	1634	1664
25°	1596	1622	1662
30°	1566	1608	1661
35°	1535	1592	1662
40°	1500	1580	1672
45°	1464	1570	1686
50°	1420	1566	1712
55°	1385	1569	1746
60°	1331	1582	1806
65°	1270	1599	1872
70°	1203	1648	1975
75°	1072	1719	2158
80°	915	1820	2205
85°	653	1803	2110



TEST NUMBER: P310728

CATALOG NUMBER: 24FCZ2-40-UNV-L82765-CA125-W2A-U-4500K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	116.9	3.1
10°-20°	334.3	8.9
20°-30°	504.9	13.5
30°-40°	608.6	16.2
40°-50°	638.9	17.1
50°-60°	597.7	16.0
60°-70°	493.6	13.2
70°-80°	336.3	9.0
80°-90°	114.7	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°	956.2	25.5
0°-40°	1564.7	41.8
0°-60°	2801.3	74.8
0°-90°	3746.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3746.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1235	1235	1235	1235	1235	
5°	1233	1232	1226	1233	1233	117
15°	1178	1180	1181	1193	1196	332
25°	1075	1080	1092	1114	1120	495
35°	935	945	969	1002	1012	584
45°	769	786	825	870	886	593
55°	590	614	669	723	744	527
65°	399	432	502	566	588	396
75°	206	254	331	393	415	220
85°	42	83	117	132	137	53
90°	0	0	0	0	0	



TEST NUMBER: P310728

CATALOG NUMBER: 24FCZ2-40-UNV-L82765-CA125-W2A-U-4500K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1235.4	1235.4	1235.4	1235.4	1235.4
2.5°	1236.6	1235.4	1229.2	1235.4	1234.2
5°	1232.9	1231.7	1225.5	1232.9	1232.9
7.5°	1224.2	1224.2	1218.0	1226.7	1227.9
10°	1211.8	1211.8	1208.1	1218.0	1218.0
12.5°	1196.9	1196.9	1196.9	1206.8	1208.1
15°	1178.2	1179.5	1180.7	1193.1	1195.6
17.5°	1155.9	1158.3	1162.1	1177.0	1179.5
20°	1132.2	1134.7	1140.9	1158.3	1162.1
22.5°	1102.4	1108.6	1117.3	1137.2	1140.9
25°	1075.1	1080.0	1092.5	1113.6	1119.8
27.5°	1041.5	1049.0	1065.1	1087.5	1096.2
30°	1008.0	1015.4	1035.3	1061.4	1068.9
32.5°	971.9	983.1	1004.2	1031.6	1040.3
35°	934.6	944.6	969.4	1001.7	1011.7
37.5°	893.6	907.3	934.6	969.4	981.9
40°	853.8	868.8	899.8	937.1	952.0
42.5°	814.1	829.0	863.8	906.0	921.0
45°	769.3	785.5	825.3	870.0	886.2
47.5°	724.6	744.5	788.0	835.2	852.6
50°	678.6	701.0	748.2	797.9	817.8
52.5°	637.6	658.7	708.4	761.9	780.5
55°	590.4	614.0	668.7	723.3	744.5
57.5°	541.9	568.0	626.4	686.1	707.2
60°	494.7	523.2	587.9	647.5	671.1
62.5°	448.7	477.3	544.4	606.5	630.1
65°	399.0	432.5	502.1	565.5	587.9
67.5°	351.7	387.8	461.1	523.2	545.6
70°	305.7	340.5	418.8	479.7	502.1
72.5°	256.0	295.8	374.1	437.5	461.1
75°	206.3	253.5	330.6	392.7	415.1
77.5°	160.3	208.8	285.9	336.8	348.0
80°	118.1	167.8	234.9	270.9	284.6
82.5°	75.8	125.5	179.0	205.1	216.3
85°	42.3	83.3	116.8	131.7	136.7
87.5°	17.4	36.0	47.2	53.4	53.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)