

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: P311400

Luminaire Tested: **24FCZ2-40-UNV-L82765-S-CA125-W2A-U-3000K**

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: P311400
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)
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-S-CA125-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" ACRYLIC SHEET
Light Source: (168) 3000K 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: 3659.0 lumens
Efficiency: N/A
Efficacy: 112.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.27 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

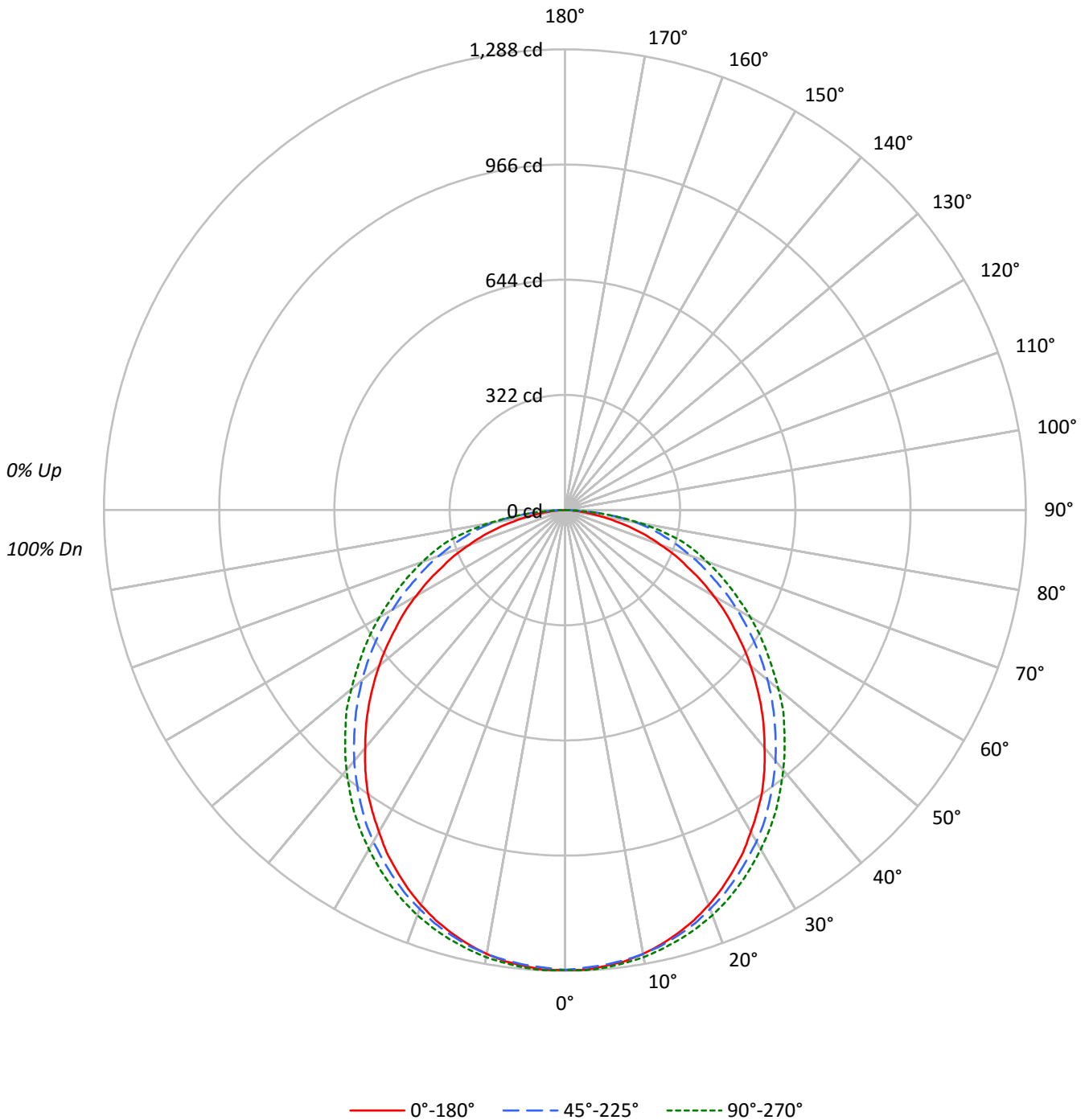
Input Watts (W): 32.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P311400

CATALOG NUMBER: 24FCZ2-40-UNV-L82765-S-CA125-W2A-U-3000K

Luminous Intensity Polar Plot





TEST NUMBER: P311400

CATALOG NUMBER: 24FCZ2-40-UNV-L82765-S-CA125-W2A-U-3000K

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	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1729	1729	1729
5°	1728	1724	1735
10°	1721	1721	1734
15°	1705	1713	1731
20°	1682	1699	1726
25°	1651	1682	1715
30°	1614	1663	1701
35°	1579	1636	1688
40°	1525	1609	1668
45°	1475	1577	1650
50°	1418	1547	1630
55°	1355	1519	1614
60°	1292	1495	1611
65°	1210	1469	1621
70°	1120	1477	1664
75°	1003	1504	1758
80°	810	1594	1720
85°	610	1400	1363



TEST NUMBER: P311400

CATALOG NUMBER: 24FCZ2-40-UNV-L82765-S-CA125-W2A-U-3000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	121.7	3.3
10°-20°	347.7	9.5
20°-30°	522.7	14.3
30°-40°	622.6	17.0
40°-50°	637.2	17.4
50°-60°	573.7	15.7
60°-70°	450.5	12.3
70°-80°	292.4	8.0
80°-90°	90.4	2.5
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°	992.1	27.1
0°-40°	1614.7	44.1
0°-60°	2825.6	77.2
0°-90°	3659.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3659.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1285	1285	1285	1285	1285	
5°	1280	1282	1276	1283	1284	122
15°	1224	1227	1230	1240	1242	345
25°	1112	1122	1133	1152	1155	512
35°	961	973	996	1020	1027	600
45°	775	794	829	860	867	598
55°	578	603	647	681	688	518
65°	380	409	461	500	509	378
75°	193	230	289	329	338	204
85°	40	73	91	88	88	48
90°	0	0	0	0	0	



TEST NUMBER: P311400

CATALOG NUMBER: 24FCZ2-40-UNV-L82765-S-CA125-W2A-U-3000K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1285.4	1285.4	1285.4	1285.4	1285.4
2.5°	1286.6	1286.6	1280.8	1286.6	1287.8
5°	1279.6	1281.9	1276.1	1283.1	1284.3
7.5°	1272.6	1272.6	1269.2	1276.1	1277.3
10°	1259.9	1261.0	1259.9	1268.0	1269.2
12.5°	1243.6	1245.9	1247.1	1255.2	1256.4
15°	1223.8	1227.3	1229.6	1240.1	1242.4
17.5°	1201.7	1205.2	1211.0	1222.7	1225.0
20°	1175.0	1179.7	1186.6	1201.7	1205.2
22.5°	1146.0	1150.6	1162.2	1176.2	1182.0
25°	1112.3	1121.6	1133.2	1151.8	1155.3
27.5°	1078.6	1086.7	1101.8	1121.6	1126.2
30°	1039.0	1051.8	1070.4	1090.2	1094.8
32.5°	1000.7	1013.5	1035.6	1056.5	1062.3
35°	961.2	972.8	996.0	1020.4	1027.4
37.5°	915.8	930.9	956.5	980.9	987.9
40°	868.2	886.8	915.8	941.4	949.5
42.5°	822.9	842.6	871.7	899.6	908.9
45°	775.2	793.8	828.7	860.1	867.0
47.5°	726.4	747.3	784.5	815.9	827.5
50°	677.6	699.7	739.2	771.7	778.7
52.5°	628.8	652.0	693.9	728.7	732.2
55°	577.6	603.2	647.4	681.1	688.0
57.5°	531.1	553.2	600.9	635.7	643.9
60°	480.0	504.4	555.5	588.1	598.6
62.5°	431.2	456.8	510.2	542.8	552.1
65°	380.1	409.1	461.4	499.8	509.1
67.5°	335.9	363.8	419.6	456.8	466.1
70°	284.7	316.1	375.4	413.8	423.1
72.5°	240.6	273.1	332.4	369.6	383.5
75°	192.9	230.1	289.4	328.9	338.2
77.5°	146.4	189.4	249.9	280.1	280.1
80°	104.6	149.9	205.7	219.7	222.0
82.5°	68.6	112.7	152.3	151.1	151.1
85°	39.5	73.2	90.7	88.3	88.3
87.5°	15.1	30.2	32.5	32.5	31.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)