

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: P311399

Luminaire Tested: **24FCZ2-40-UNV-L82765-S-CA125-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: P311399
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-2700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" 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: 3555.0 lumens
Efficiency: N/A
Efficacy: 108.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

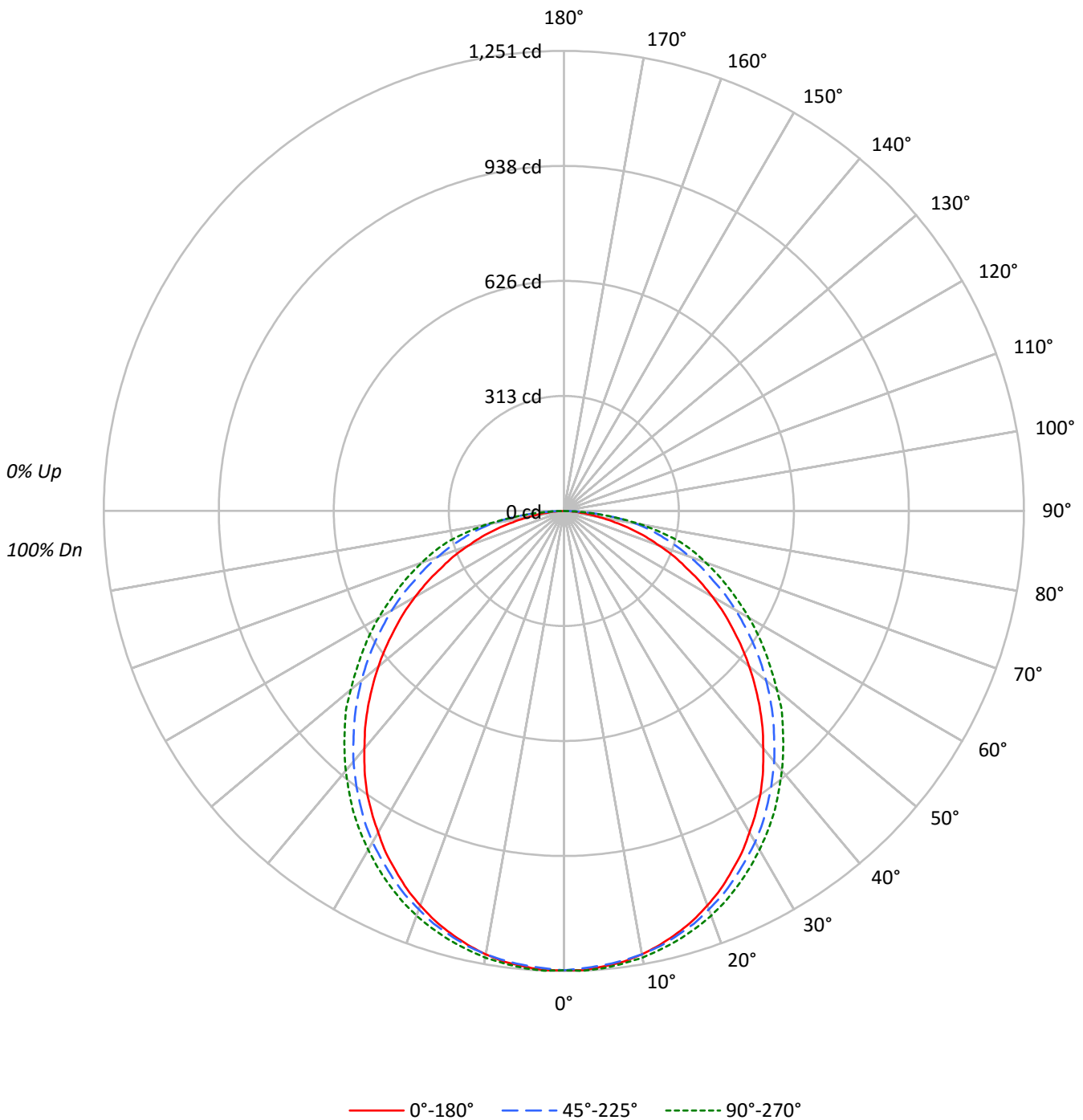
Input Watts (W): 32.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1680	1680	1680
5°	1679	1675	1685
10°	1672	1672	1685
15°	1656	1664	1681
20°	1635	1651	1677
25°	1604	1635	1666
30°	1568	1616	1653
35°	1534	1589	1640
40°	1482	1563	1620
45°	1433	1532	1603
50°	1378	1503	1584
55°	1316	1476	1568
60°	1255	1453	1565
65°	1175	1427	1575
70°	1089	1435	1617
75°	974	1462	1708
80°	787	1549	1671
85°	593	1360	1325



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	118.2	3.3
10°-20°	337.8	9.5
20°-30°	507.8	14.3
30°-40°	604.9	17.0
40°-50°	619.1	17.4
50°-60°	557.4	15.7
60°-70°	437.7	12.3
70°-80°	284.1	8.0
80°-90°	87.9	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°	963.9	27.1
0°-40°	1568.8	44.1
0°-60°	2745.3	77.2
0°-90°	3555.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3555.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1249	1249	1249	1249	1249	
5°	1243	1246	1240	1247	1248	118
15°	1189	1192	1195	1205	1207	335
25°	1081	1090	1101	1119	1122	498
35°	934	945	968	991	998	583
45°	753	771	805	836	842	581
55°	561	586	629	662	668	503
65°	369	398	448	486	495	368
75°	187	224	281	320	329	198
85°	38	71	88	86	86	46
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1248.9	1248.9	1248.9	1248.9	1248.9
2.5°	1250.0	1250.0	1244.4	1250.0	1251.2
5°	1243.2	1245.5	1239.9	1246.6	1247.8
7.5°	1236.5	1236.5	1233.1	1239.9	1241.0
10°	1224.1	1225.2	1224.1	1232.0	1233.1
12.5°	1208.2	1210.5	1211.6	1219.5	1220.7
15°	1189.0	1192.4	1194.7	1204.9	1207.1
17.5°	1167.6	1171.0	1176.6	1187.9	1190.2
20°	1141.6	1146.1	1152.9	1167.6	1171.0
22.5°	1113.4	1117.9	1129.2	1142.7	1148.4
25°	1080.6	1089.7	1101.0	1119.0	1122.4
27.5°	1047.9	1055.8	1070.5	1089.7	1094.2
30°	1009.5	1021.9	1040.0	1059.2	1063.7
32.5°	972.2	984.7	1006.1	1026.4	1032.1
35°	933.8	945.1	967.7	991.4	998.2
37.5°	889.8	904.5	929.3	953.0	959.8
40°	843.5	861.6	889.8	914.7	922.6
42.5°	799.5	818.7	846.9	874.0	883.0
45°	753.2	771.2	805.1	835.6	842.4
47.5°	705.7	726.1	762.2	792.7	804.0
50°	658.3	679.8	718.2	749.8	756.6
52.5°	610.9	633.5	674.1	708.0	711.4
55°	561.2	586.1	629.0	661.7	668.5
57.5°	516.0	537.5	583.8	617.7	625.6
60°	466.4	490.1	539.8	571.4	581.5
62.5°	418.9	443.8	495.7	527.3	536.4
65°	369.2	397.5	448.3	485.6	494.6
67.5°	326.3	353.4	407.6	443.8	452.8
70°	276.7	307.1	364.7	402.0	411.0
72.5°	233.7	265.4	323.0	359.1	372.6
75°	187.4	223.6	281.2	319.6	328.6
77.5°	142.3	184.1	242.8	272.1	272.1
80°	101.6	145.7	199.9	213.4	215.7
82.5°	66.6	109.5	147.9	146.8	146.8
85°	38.4	71.1	88.1	85.8	85.8
87.5°	14.7	29.4	31.6	31.6	30.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)