

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: P311314

Luminaire Tested: **24FCZ2-35-UNV-L82765-S-CA125-W2A-U-5000K**

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: P311314
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: 24FCZ2-35-UNV-L82765-S-CA125-W2A-U-5000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" ACRYLIC SHEET
Light Source: (168) 5000K 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: 3505.0 lumens
Efficiency: N/A
Efficacy: 122.1 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

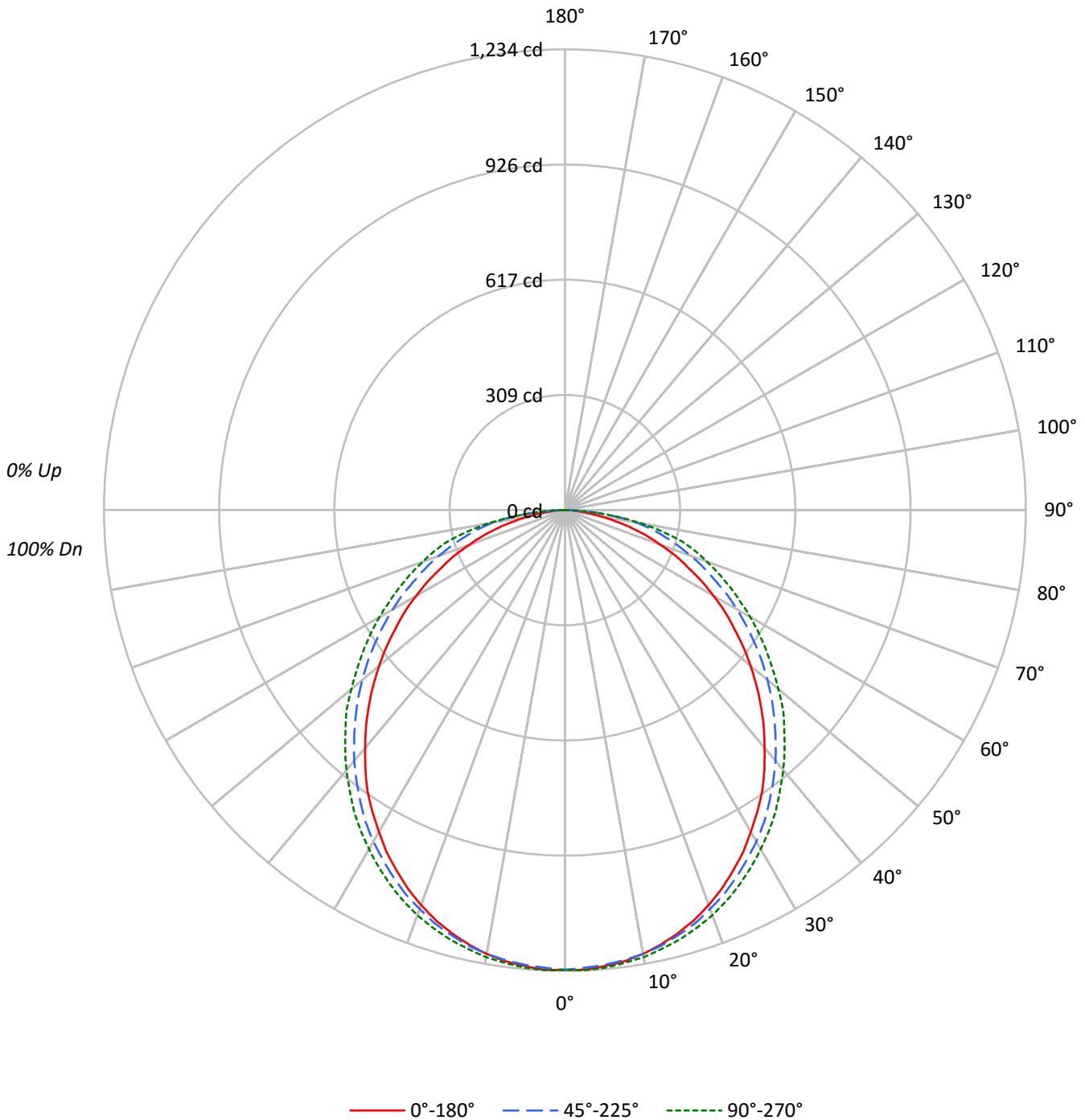
Input Watts (W): 28.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1657	1657	1657
5°	1656	1651	1662
10°	1649	1649	1661
15°	1633	1641	1658
20°	1612	1628	1653
25°	1582	1612	1643
30°	1546	1593	1629
35°	1512	1567	1617
40°	1461	1541	1598
45°	1413	1510	1580
50°	1359	1482	1561
55°	1298	1455	1546
60°	1237	1432	1543
65°	1159	1407	1552
70°	1073	1415	1594
75°	961	1441	1684
80°	776	1527	1647
85°	585	1340	1306



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	116.6	3.3
10°-20°	333.1	9.5
20°-30°	500.7	14.3
30°-40°	596.4	17.0
40°-50°	610.4	17.4
50°-60°	549.5	15.7
60°-70°	431.6	12.3
70°-80°	280.1	8.0
80°-90°	86.6	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°	950.4	27.1
0°-40°	1546.8	44.1
0°-60°	2706.7	77.2
0°-90°	3505.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3505.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1231	1231	1231	1231	1231	
5°	1226	1228	1222	1229	1230	116
15°	1172	1176	1178	1188	1190	331
25°	1065	1074	1086	1103	1107	491
35°	921	932	954	978	984	574
45°	743	760	794	824	830	572
55°	553	578	620	652	659	496
65°	364	392	442	479	488	362
75°	185	220	277	315	324	196
85°	38	70	87	85	85	46
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1231.3	1231.3	1231.3	1231.3	1231.3
2.5°	1232.4	1232.4	1226.9	1232.4	1233.6
5°	1225.8	1228.0	1222.4	1229.1	1230.2
7.5°	1219.1	1219.1	1215.7	1222.4	1223.5
10°	1206.8	1207.9	1206.8	1214.6	1215.7
12.5°	1191.2	1193.5	1194.6	1202.4	1203.5
15°	1172.3	1175.7	1177.9	1187.9	1190.1
17.5°	1151.2	1154.5	1160.1	1171.2	1173.4
20°	1125.6	1130.0	1136.7	1151.2	1154.5
22.5°	1097.7	1102.2	1113.3	1126.7	1132.2
25°	1065.4	1074.4	1085.5	1103.3	1106.6
27.5°	1033.2	1041.0	1055.4	1074.4	1078.8
30°	995.3	1007.6	1025.4	1044.3	1048.7
32.5°	958.6	970.8	992.0	1012.0	1017.6
35°	920.7	931.8	954.1	977.5	984.2
37.5°	877.3	891.8	916.3	939.6	946.3
40°	831.6	849.5	877.3	901.8	909.6
42.5°	788.2	807.2	835.0	861.7	870.6
45°	742.6	760.4	793.8	823.9	830.5
47.5°	695.8	715.9	751.5	781.5	792.7
50°	649.1	670.2	708.1	739.2	745.9
52.5°	602.3	624.6	664.7	698.1	701.4
55°	553.3	577.8	620.1	652.4	659.1
57.5°	508.8	529.9	575.6	609.0	616.8
60°	459.8	483.2	532.2	563.3	573.4
62.5°	413.0	437.5	488.7	519.9	528.8
65°	364.1	391.9	442.0	478.7	487.6
67.5°	321.7	348.5	401.9	437.5	446.4
70°	272.8	302.8	359.6	396.3	405.2
72.5°	230.5	261.6	318.4	354.0	367.4
75°	184.8	220.4	277.2	315.1	324.0
77.5°	140.3	181.5	239.4	268.3	268.3
80°	100.2	143.6	197.1	210.4	212.6
82.5°	65.7	108.0	145.8	144.7	144.7
85°	37.9	70.1	86.8	84.6	84.6
87.5°	14.5	28.9	31.2	31.2	30.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)