

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: P311312

Luminaire Tested: **24FCZ2-35-UNV-L82765-S-CA125-W2A-U-4000K**

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: P311312
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-4000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" ACRYLIC SHEET
Light Source: (168) 4000K 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: 3399.0 lumens
Efficiency: N/A
Efficacy: 120.1 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

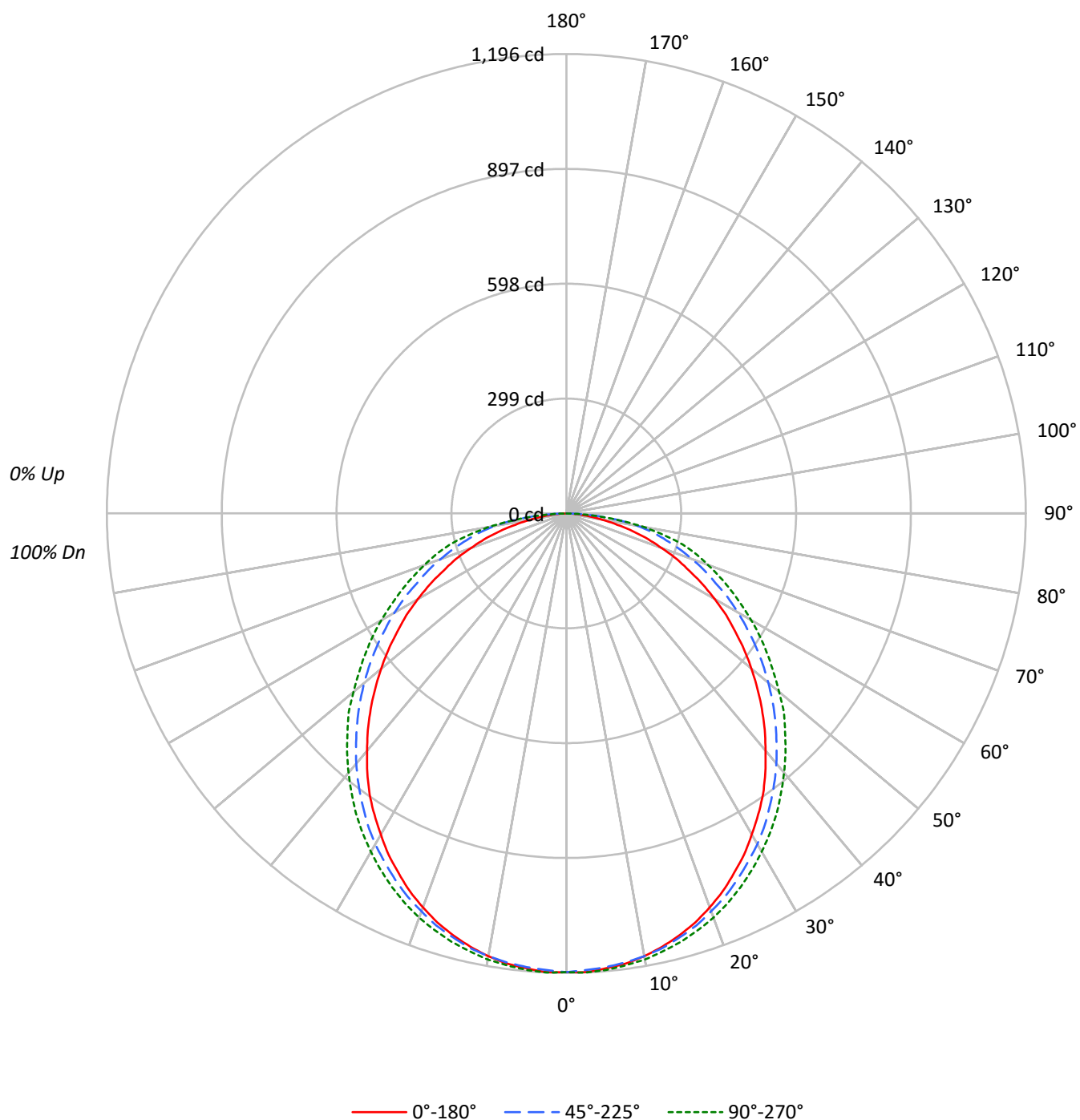
Input Watts (W): 28.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1607	1607	1607
5°	1605	1601	1611
10°	1599	1599	1611
15°	1584	1591	1608
20°	1563	1578	1603
25°	1534	1563	1593
30°	1500	1545	1580
35°	1467	1520	1568
40°	1417	1494	1549
45°	1370	1465	1533
50°	1317	1437	1514
55°	1259	1411	1499
60°	1200	1389	1496
65°	1124	1365	1506
70°	1041	1372	1546
75°	932	1397	1633
80°	753	1481	1598
85°	567	1300	1267



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	113.0	3.3
10°-20°	323.0	9.5
20°-30°	485.6	14.3
30°-40°	578.4	17.0
40°-50°	591.9	17.4
50°-60°	532.9	15.7
60°-70°	418.5	12.3
70°-80°	271.6	8.0
80°-90°	84.0	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°	921.6	27.1
0°-40°	1500.0	44.1
0°-60°	2624.9	77.2
0°-90°	3399.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3399.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1194	1194	1194	1194	1194	
5°	1189	1191	1186	1192	1193	113
15°	1137	1140	1142	1152	1154	321
25°	1033	1042	1053	1070	1073	476
35°	893	904	925	948	954	557
45°	720	737	770	799	805	555
55°	537	560	601	633	639	481
65°	353	380	429	464	473	351
75°	179	214	269	306	314	190
85°	37	68	84	82	82	44
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1194.1	1194.1	1194.1	1194.1	1194.1
2.5°	1195.2	1195.2	1189.8	1195.2	1196.3
5°	1188.7	1190.9	1185.5	1191.9	1193.0
7.5°	1182.2	1182.2	1179.0	1185.5	1186.5
10°	1170.3	1171.4	1170.3	1177.9	1179.0
12.5°	1155.2	1157.4	1158.5	1166.0	1167.1
15°	1136.9	1140.1	1142.3	1152.0	1154.1
17.5°	1116.4	1119.6	1125.0	1135.8	1137.9
20°	1091.5	1095.8	1102.3	1116.4	1119.6
22.5°	1064.5	1068.9	1079.6	1092.6	1098.0
25°	1033.2	1041.9	1052.7	1069.9	1073.2
27.5°	1001.9	1009.5	1023.5	1041.9	1046.2
30°	965.2	977.1	994.4	1012.7	1017.0
32.5°	929.6	941.5	962.0	981.4	986.8
35°	892.9	903.7	925.3	947.9	954.4
37.5°	850.8	864.8	888.6	911.2	917.7
40°	806.5	823.8	850.8	874.5	882.1
42.5°	764.4	782.7	809.7	835.6	844.3
45°	720.1	737.4	769.8	798.9	805.4
47.5°	674.8	694.2	728.8	757.9	768.7
50°	629.4	649.9	686.7	716.9	723.4
52.5°	584.1	605.7	644.5	676.9	680.2
55°	536.6	560.3	601.4	632.7	639.2
57.5°	493.4	513.9	558.2	590.6	598.1
60°	445.9	468.6	516.1	546.3	556.0
62.5°	400.5	424.3	474.0	504.2	512.8
65°	353.0	380.0	428.6	464.2	472.9
67.5°	312.0	337.9	389.8	424.3	432.9
70°	264.5	293.7	348.7	384.4	393.0
72.5°	223.5	253.7	308.8	343.3	356.3
75°	179.2	213.8	268.8	305.5	314.2
77.5°	136.0	176.0	232.1	260.2	260.2
80°	97.2	139.3	191.1	204.1	206.2
82.5°	63.7	104.7	141.4	140.4	140.4
85°	36.7	68.0	84.2	82.1	82.1
87.5°	14.0	28.1	30.2	30.2	29.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)