

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: P314251

Luminaire Tested: **24FCZ2-35-UNV-L83050-S-CP125-W2A-U-3500K**

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: P314251
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-L83050-S-CP125-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB SHEET
Light Source: (168) 3500K 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: 3339.0 lumens
Efficiency: N/A
Efficacy: 119.2 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

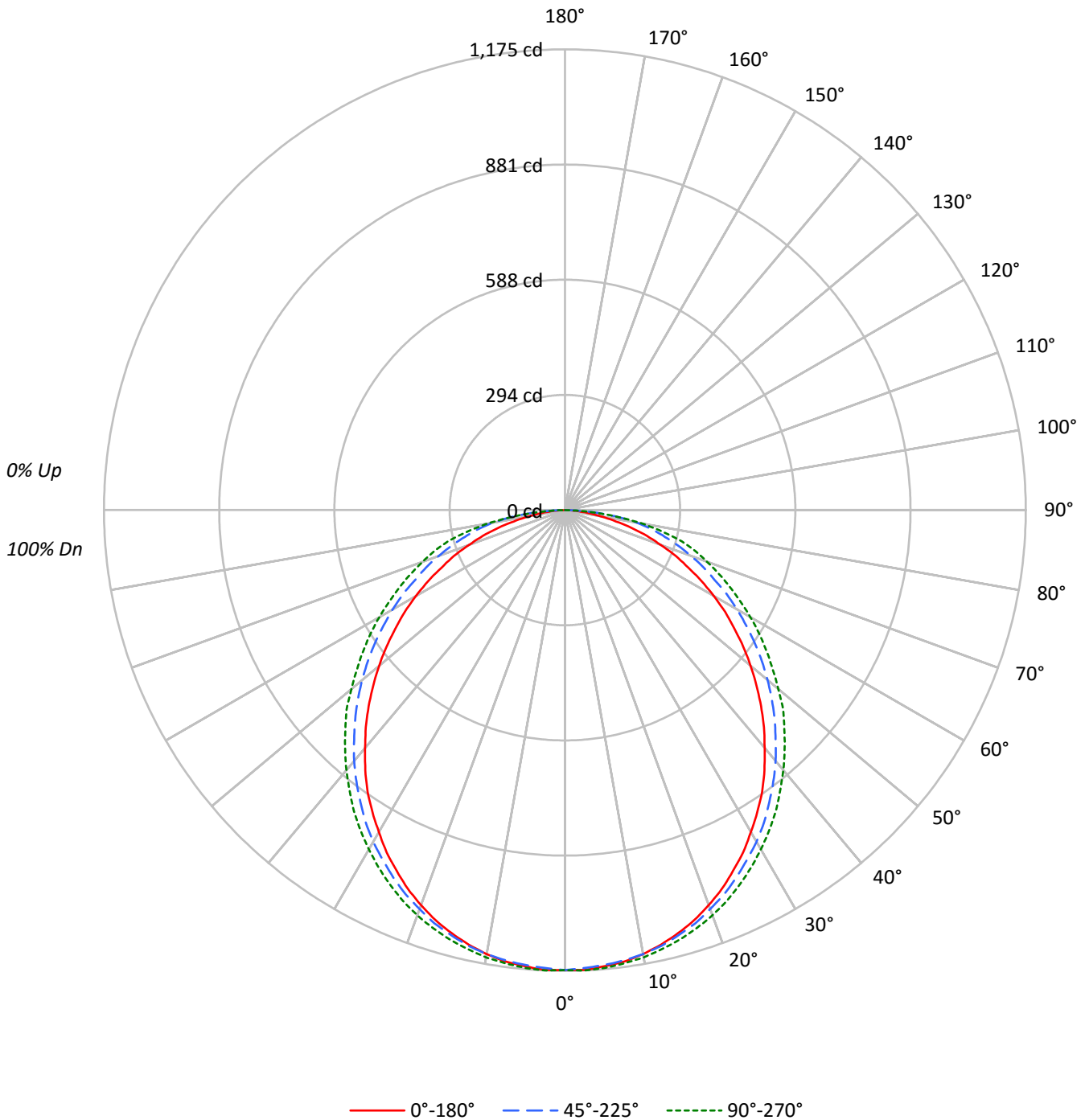
Input Watts (W): 28
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1578	1578	1578
5°	1577	1573	1583
10°	1571	1571	1582
15°	1556	1563	1579
20°	1535	1551	1575
25°	1507	1535	1565
30°	1473	1518	1552
35°	1441	1493	1540
40°	1392	1468	1522
45°	1346	1439	1506
50°	1294	1412	1487
55°	1236	1386	1473
60°	1179	1364	1470
65°	1104	1341	1479
70°	1022	1348	1519
75°	915	1373	1604
80°	740	1454	1570
85°	557	1277	1244



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	111.0	3.3
10°-20°	317.3	9.5
20°-30°	477.0	14.3
30°-40°	568.2	17.0
40°-50°	581.5	17.4
50°-60°	523.5	15.7
60°-70°	411.1	12.3
70°-80°	266.8	8.0
80°-90°	82.5	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°	905.3	27.1
0°-40°	1473.5	44.1
0°-60°	2578.5	77.2
0°-90°	3339.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3339.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1173	1173	1173	1173	1173	
5°	1168	1170	1164	1171	1172	111
15°	1117	1120	1122	1132	1134	315
25°	1015	1024	1034	1051	1054	468
35°	877	888	909	931	938	547
45°	707	724	756	785	791	545
55°	527	550	591	622	628	473
65°	347	373	421	456	464	345
75°	176	210	264	300	309	186
85°	36	67	83	81	81	44
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1173.0	1173.0	1173.0	1173.0	1173.0
2.5°	1174.1	1174.1	1168.8	1174.1	1175.1
5°	1167.7	1169.8	1164.5	1170.9	1172.0
7.5°	1161.3	1161.3	1158.2	1164.5	1165.6
10°	1149.7	1150.7	1149.7	1157.1	1158.2
12.5°	1134.8	1137.0	1138.0	1145.4	1146.5
15°	1116.8	1120.0	1122.1	1131.6	1133.8
17.5°	1096.7	1099.8	1105.1	1115.7	1117.9
20°	1072.3	1076.5	1082.9	1096.7	1099.8
22.5°	1045.7	1050.0	1060.6	1073.3	1078.6
25°	1015.0	1023.5	1034.1	1051.0	1054.2
27.5°	984.2	991.7	1005.4	1023.5	1027.7
30°	948.2	959.8	976.8	994.8	999.1
32.5°	913.2	924.8	945.0	964.1	969.4
35°	877.1	887.7	908.9	931.2	937.6
37.5°	835.7	849.5	872.9	895.1	901.5
40°	792.3	809.2	835.7	859.1	866.5
42.5°	750.9	768.9	795.4	820.9	829.4
45°	707.4	724.4	756.2	784.8	791.2
47.5°	662.9	682.0	715.9	744.5	755.1
50°	618.3	638.5	674.5	704.2	710.6
52.5°	573.8	595.0	633.2	665.0	668.2
55°	527.1	550.4	590.7	621.5	627.9
57.5°	484.7	504.8	548.3	580.1	587.6
60°	438.0	460.3	507.0	536.7	546.2
62.5°	393.5	416.8	465.6	495.3	503.8
65°	346.8	373.3	421.1	456.1	464.5
67.5°	306.5	332.0	382.9	416.8	425.3
70°	259.8	288.5	342.6	377.6	386.1
72.5°	219.5	249.2	303.3	337.3	350.0
75°	176.1	210.0	264.1	300.1	308.6
77.5°	133.6	172.9	228.0	255.6	255.6
80°	95.5	136.8	187.7	200.5	202.6
82.5°	62.6	102.9	138.9	137.9	137.9
85°	36.1	66.8	82.7	80.6	80.6
87.5°	13.8	27.6	29.7	29.7	28.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)