

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: P310640

Luminaire Tested: **24FCZ2-35-UNV-L82765-CA125-W2A-U-5500K**

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: P310640
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-15)
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-CA125-W2A-U-5500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" ACRYLIC SHEET
Light Source: (168) 5500K 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: 3370.0 lumens
Efficiency: N/A
Efficacy: 117.0 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

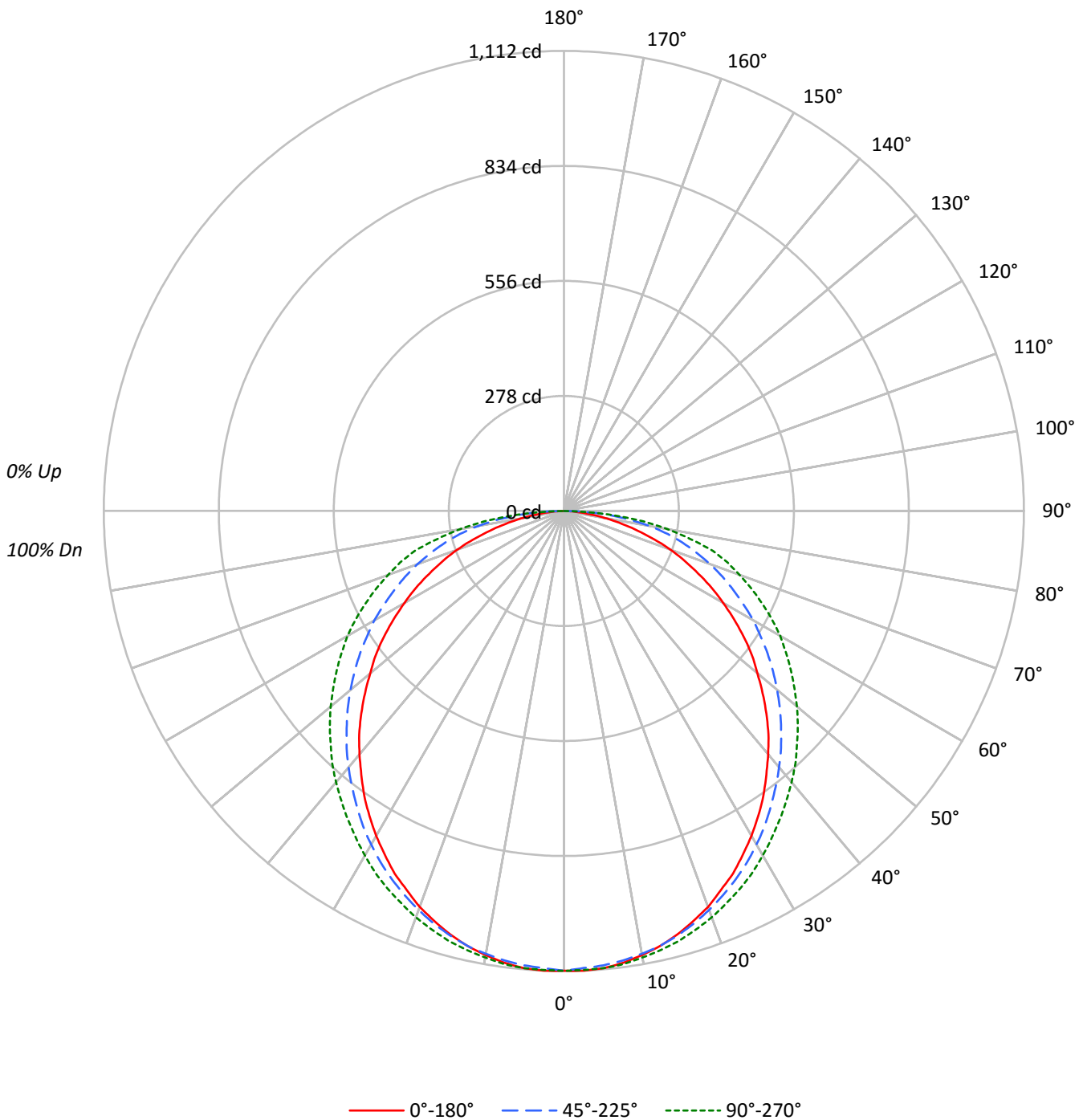
Input Watts (W): 28.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	98	94	105	100	96	92	96	92	89	92	89	87	88	86	84	82
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	79	67	58	52	64	57	51	62	56	50	60	54	50	47
5	74	61	52	45	72	60	51	44	58	50	44	56	49	43	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	64	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	37	31	57	45	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1495	1495	1495
5°	1498	1489	1498
10°	1489	1485	1497
15°	1477	1480	1498
20°	1458	1470	1497
25°	1436	1459	1496
30°	1409	1447	1494
35°	1381	1432	1495
40°	1349	1422	1504
45°	1317	1413	1517
50°	1278	1409	1540
55°	1246	1411	1571
60°	1197	1423	1625
65°	1143	1438	1684
70°	1082	1482	1777
75°	965	1546	1941
80°	823	1637	1984
85°	587	1623	1899



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	105.2	3.1
10°-20°	300.7	8.9
20°-30°	454.3	13.5
30°-40°	547.5	16.2
40°-50°	574.8	17.1
50°-60°	537.7	16.0
60°-70°	444.1	13.2
70°-80°	302.6	9.0
80°-90°	103.2	3.1
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°	860.2	25.5
0°-40°	1407.7	41.8
0°-60°	2520.1	74.8
0°-90°	3370.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3370.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1111	1111	1111	1111	1111	
5°	1109	1108	1102	1109	1109	105
15°	1060	1061	1062	1073	1076	299
25°	967	972	983	1002	1007	445
35°	841	850	872	901	910	525
45°	692	707	742	783	797	534
55°	531	552	602	651	670	474
65°	359	389	452	509	529	356
75°	186	228	297	353	373	198
85°	38	75	105	118	123	48
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1111.4	1111.4	1111.4	1111.4	1111.4
2.5°	1112.5	1111.4	1105.8	1111.4	1110.3
5°	1109.2	1108.0	1102.5	1109.2	1109.2
7.5°	1101.3	1101.3	1095.7	1103.6	1104.7
10°	1090.2	1090.2	1086.8	1095.7	1095.7
12.5°	1076.7	1076.7	1076.7	1085.7	1086.8
15°	1060.0	1061.1	1062.2	1073.4	1075.6
17.5°	1039.8	1042.1	1045.4	1058.8	1061.1
20°	1018.6	1020.8	1026.4	1042.1	1045.4
22.5°	991.8	997.3	1005.2	1023.1	1026.4
25°	967.2	971.6	982.8	1001.8	1007.4
27.5°	937.0	943.7	958.2	978.3	986.2
30°	906.8	913.5	931.4	954.9	961.6
32.5°	874.4	884.4	903.4	928.0	935.9
35°	840.8	849.8	872.1	901.2	910.1
37.5°	803.9	816.2	840.8	872.1	883.3
40°	768.1	781.6	809.5	843.1	856.5
42.5°	732.4	745.8	777.1	815.1	828.5
45°	692.1	706.6	742.4	782.7	797.2
47.5°	651.9	669.7	708.9	751.4	767.0
50°	610.5	630.6	673.1	717.8	735.7
52.5°	573.6	592.6	637.3	685.4	702.2
55°	531.1	552.3	601.5	650.7	669.7
57.5°	487.5	511.0	563.5	617.2	636.2
60°	445.0	470.7	528.9	582.5	603.8
62.5°	403.6	429.4	489.7	545.6	566.9
65°	358.9	389.1	451.7	508.7	528.9
67.5°	316.4	348.8	414.8	470.7	490.8
70°	275.1	306.4	376.8	431.6	451.7
72.5°	230.3	266.1	336.5	393.6	414.8
75°	185.6	228.1	297.4	353.3	373.4
77.5°	144.2	187.8	257.2	303.0	313.1
80°	106.2	150.9	211.3	243.7	256.0
82.5°	68.2	112.9	161.0	184.5	194.6
85°	38.0	74.9	105.1	118.5	123.0
87.5°	15.7	32.4	42.5	48.1	48.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)