

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: P313866

Luminaire Tested: **24FCZ2-35-UNV-L83050-CA08-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: P313866
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-L83050-CA08-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.08" ACRYLIC 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: 3252.0 lumens
Efficiency: N/A
Efficacy: 116.1 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

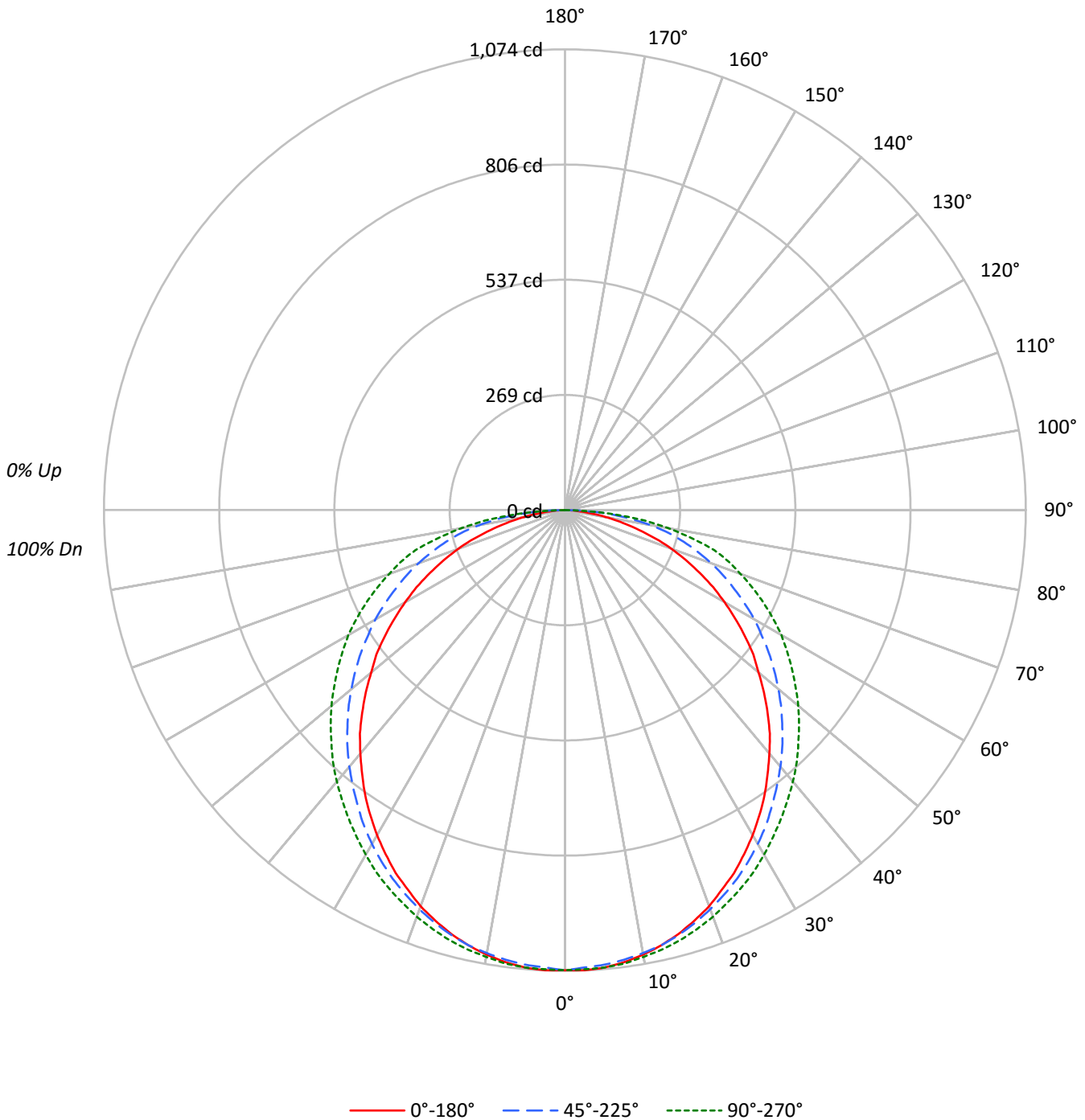
Input Watts (W): 28
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1443	1443	1443
5°	1446	1437	1446
10°	1437	1433	1445
15°	1425	1428	1446
20°	1407	1418	1444
25°	1386	1408	1443
30°	1359	1396	1442
35°	1333	1382	1443
40°	1302	1372	1452
45°	1271	1363	1464
50°	1233	1360	1486
55°	1202	1362	1516
60°	1156	1373	1568
65°	1103	1388	1625
70°	1044	1430	1715
75°	931	1492	1874
80°	794	1580	1915
85°	567	1565	1832



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	101.5	3.1
10°-20°	290.2	8.9
20°-30°	438.3	13.5
30°-40°	528.3	16.2
40°-50°	554.6	17.1
50°-60°	518.9	16.0
60°-70°	428.5	13.2
70°-80°	292.0	9.0
80°-90°	99.6	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°	830.1	25.5
0°-40°	1358.4	41.8
0°-60°	2431.9	74.8
0°-90°	3252.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3252.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1072	1072	1072	1072	1072	
5°	1070	1069	1064	1070	1070	102
15°	1023	1024	1025	1036	1038	288
25°	933	938	948	967	972	429
35°	811	820	842	870	878	507
45°	668	682	716	755	769	515
55°	512	533	580	628	646	457
65°	346	376	436	491	510	344
75°	179	220	287	341	360	191
85°	37	72	101	114	119	46
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1072.5	1072.5	1072.5	1072.5	1072.5
2.5°	1073.6	1072.5	1067.1	1072.5	1071.4
5°	1070.3	1069.2	1063.8	1070.3	1070.3
7.5°	1062.8	1062.8	1057.4	1064.9	1066.0
10°	1052.0	1052.0	1048.7	1057.4	1057.4
12.5°	1039.0	1039.0	1039.0	1047.7	1048.7
15°	1022.8	1023.9	1025.0	1035.8	1038.0
17.5°	1003.4	1005.6	1008.8	1021.8	1023.9
20°	982.9	985.1	990.5	1005.6	1008.8
22.5°	957.0	962.4	970.0	987.2	990.5
25°	933.3	937.6	948.4	966.7	972.1
27.5°	904.2	910.6	924.7	944.1	951.6
30°	875.0	881.5	898.8	921.4	927.9
32.5°	843.7	853.5	871.8	895.5	903.1
35°	811.4	820.0	841.6	869.6	878.3
37.5°	775.8	787.6	811.4	841.6	852.4
40°	741.2	754.2	781.2	813.5	826.5
42.5°	706.7	719.7	749.9	786.6	799.5
45°	667.9	681.9	716.4	755.3	769.3
47.5°	629.0	646.3	684.1	725.1	740.2
50°	589.1	608.5	649.5	692.7	710.0
52.5°	553.5	571.8	615.0	661.4	677.6
55°	512.5	533.0	580.5	628.0	646.3
57.5°	470.4	493.1	543.8	595.6	613.9
60°	429.4	454.2	510.3	562.1	582.6
62.5°	389.5	414.3	472.6	526.5	547.0
65°	346.3	375.5	435.9	490.9	510.3
67.5°	305.3	336.6	400.3	454.2	473.7
70°	265.4	295.6	363.6	416.5	435.9
72.5°	222.3	256.8	324.8	379.8	400.3
75°	179.1	220.1	287.0	340.9	360.4
77.5°	139.2	181.3	248.2	292.4	302.1
80°	102.5	145.7	203.9	235.2	247.1
82.5°	65.8	109.0	155.4	178.0	187.7
85°	36.7	72.3	101.4	114.4	118.7
87.5°	15.1	31.3	41.0	46.4	46.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)