

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: P310638

Luminaire Tested: **24FCZ2-35-UNV-L82765-CA125-W2A-U-4500K**

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: P310638
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-4500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" ACRYLIC SHEET
Light Source: (168) 4500K 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: 3291.0 lumens
Efficiency: N/A
Efficacy: 115.5 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

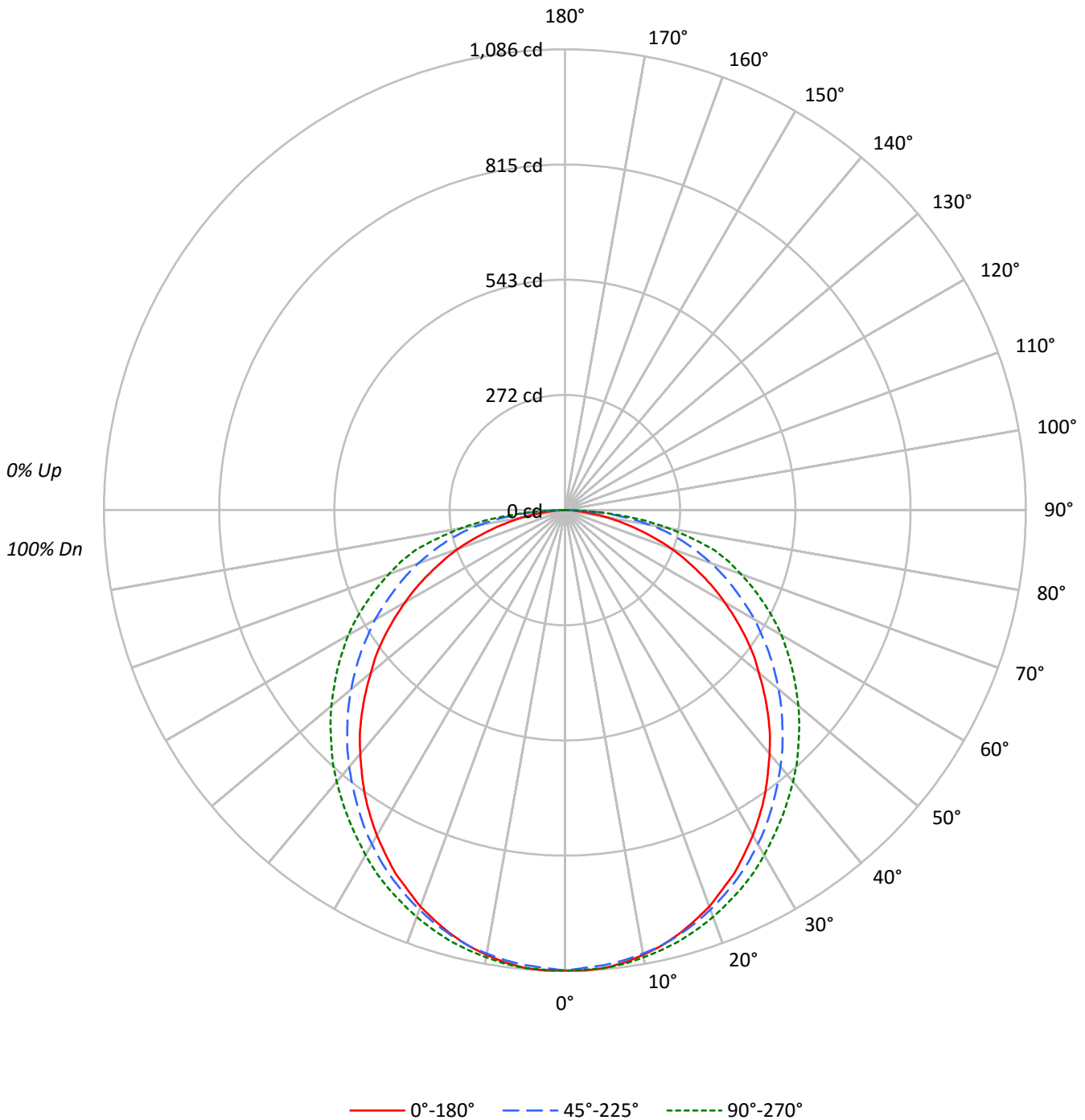
Input Watts (W): 28.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1460	1460	1460
5°	1463	1454	1463
10°	1455	1450	1462
15°	1442	1445	1463
20°	1424	1435	1462
25°	1402	1425	1461
30°	1376	1413	1459
35°	1349	1399	1460
40°	1317	1388	1469
45°	1286	1380	1481
50°	1248	1376	1504
55°	1217	1378	1534
60°	1169	1390	1587
65°	1116	1404	1644
70°	1057	1448	1735
75°	943	1510	1896
80°	804	1599	1937
85°	573	1584	1854



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	102.7	3.1
10°-20°	293.7	8.9
20°-30°	443.6	13.5
30°-40°	534.7	16.2
40°-50°	561.3	17.1
50°-60°	525.1	16.0
60°-70°	433.7	13.2
70°-80°	295.5	9.0
80°-90°	100.8	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°	840.0	25.5
0°-40°	1374.7	41.8
0°-60°	2461.1	74.8
0°-90°	3291.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3291.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1085	1085	1085	1085	1085	
5°	1083	1082	1077	1083	1083	103
15°	1035	1036	1037	1048	1050	292
25°	944	949	960	978	984	435
35°	821	830	852	880	889	513
45°	676	690	725	764	778	521
55°	519	539	587	636	654	463
65°	350	380	441	497	516	348
75°	181	223	290	345	365	193
85°	37	73	103	116	120	46
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1085.3	1085.3	1085.3	1085.3	1085.3
2.5°	1086.4	1085.3	1079.9	1085.3	1084.3
5°	1083.2	1082.1	1076.6	1083.2	1083.2
7.5°	1075.5	1075.5	1070.1	1077.7	1078.8
10°	1064.6	1064.6	1061.3	1070.1	1070.1
12.5°	1051.5	1051.5	1051.5	1060.2	1061.3
15°	1035.1	1036.2	1037.3	1048.2	1050.4
17.5°	1015.5	1017.6	1020.9	1034.0	1036.2
20°	994.7	996.9	1002.4	1017.6	1020.9
22.5°	968.5	974.0	981.6	999.1	1002.4
25°	944.5	948.9	959.8	978.3	983.8
27.5°	915.0	921.6	935.8	955.4	963.1
30°	885.5	892.1	909.5	932.5	939.0
32.5°	853.9	863.7	882.3	906.3	913.9
35°	821.1	829.8	851.7	880.1	888.8
37.5°	785.1	797.1	821.1	851.7	862.6
40°	750.1	763.2	790.5	823.3	836.4
42.5°	715.2	728.3	758.9	796.0	809.1
45°	675.9	690.1	725.0	764.3	778.5
47.5°	636.6	654.0	692.3	733.8	749.0
50°	596.2	615.8	657.3	701.0	718.5
52.5°	560.1	578.7	622.4	669.3	685.7
55°	518.6	539.4	587.4	635.5	654.0
57.5°	476.1	499.0	550.3	602.7	621.3
60°	434.6	459.7	516.5	568.9	589.6
62.5°	394.2	419.3	478.2	532.8	553.6
65°	350.5	380.0	441.1	496.8	516.5
67.5°	309.0	340.7	405.1	459.7	479.3
70°	268.6	299.2	368.0	421.5	441.1
72.5°	224.9	259.9	328.7	384.3	405.1
75°	181.3	222.7	290.4	345.0	364.7
77.5°	140.9	183.4	251.1	295.9	305.7
80°	103.7	147.4	206.4	238.0	250.0
82.5°	66.6	110.3	157.2	180.2	190.0
85°	37.1	73.2	102.6	115.7	120.1
87.5°	15.3	31.7	41.5	47.0	47.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)