

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: P314256

Luminaire Tested: **24FCZ2-35-UNV-L83050-S-CP187-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: P314256
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-CP187-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.187" 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: 3197.0 lumens
Efficiency: N/A
Efficacy: 114.2 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

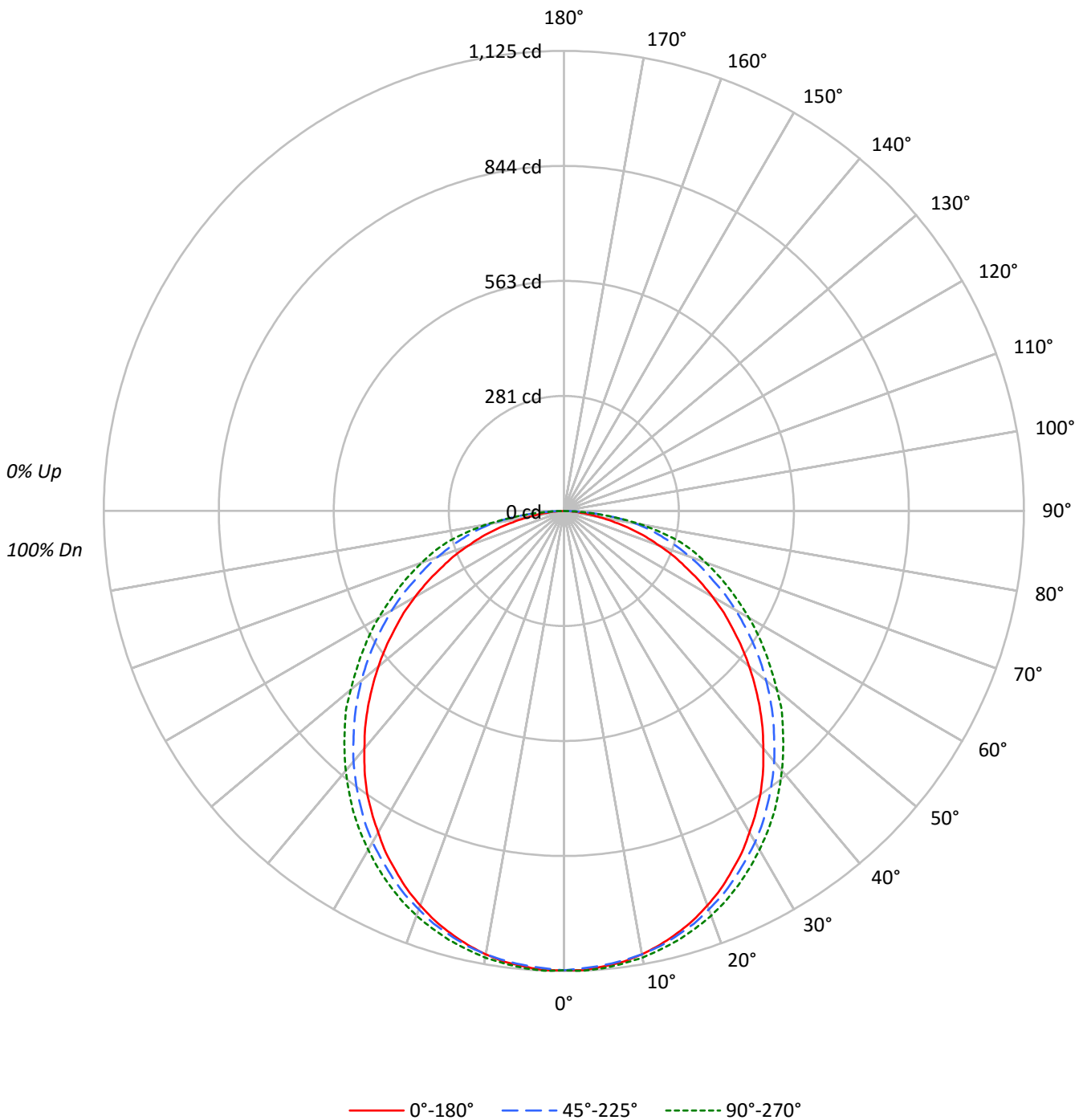
Input Watts (W): 28
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1511	1511	1511
5°	1510	1506	1516
10°	1504	1504	1515
15°	1489	1497	1512
20°	1470	1485	1508
25°	1443	1470	1499
30°	1410	1453	1486
35°	1379	1430	1475
40°	1332	1405	1457
45°	1289	1378	1442
50°	1239	1352	1424
55°	1184	1327	1410
60°	1129	1306	1407
65°	1057	1283	1416
70°	979	1290	1454
75°	876	1315	1536
80°	708	1392	1503
85°	533	1223	1192



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	106.3	3.3
10°-20°	303.8	9.5
20°-30°	456.7	14.3
30°-40°	544.0	17.0
40°-50°	556.8	17.4
50°-60°	501.3	15.7
60°-70°	393.6	12.3
70°-80°	255.5	8.0
80°-90°	79.0	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°	866.8	27.1
0°-40°	1410.8	44.1
0°-60°	2468.9	77.2
0°-90°	3197.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3197.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1123	1123	1123	1123	1123	
5°	1118	1120	1115	1121	1122	106
15°	1069	1072	1074	1084	1086	302
25°	972	980	990	1006	1009	448
35°	840	850	870	892	898	524
45°	677	694	724	752	758	522
55°	505	527	566	595	601	452
65°	332	358	403	437	445	331
75°	169	201	253	287	296	178
85°	34	64	79	77	77	42
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1123.1	1123.1	1123.1	1123.1	1123.1
2.5°	1124.1	1124.1	1119.1	1124.1	1125.2
5°	1118.0	1120.1	1115.0	1121.1	1122.1
7.5°	1112.0	1112.0	1108.9	1115.0	1116.0
10°	1100.8	1101.8	1100.8	1107.9	1108.9
12.5°	1086.6	1088.6	1089.6	1096.7	1097.7
15°	1069.3	1072.4	1074.4	1083.5	1085.6
17.5°	1050.0	1053.1	1058.1	1068.3	1070.3
20°	1026.7	1030.7	1036.8	1050.0	1053.1
22.5°	1001.3	1005.3	1015.5	1027.7	1032.7
25°	971.8	979.9	990.1	1006.3	1009.4
27.5°	942.4	949.5	962.7	979.9	984.0
30°	907.8	919.0	935.3	952.5	956.6
32.5°	874.3	885.5	904.8	923.1	928.2
35°	839.8	850.0	870.3	891.6	897.7
37.5°	800.2	813.4	835.7	857.1	863.2
40°	758.6	774.8	800.2	822.5	829.7
42.5°	719.0	736.2	761.6	786.0	794.1
45°	677.3	693.6	724.0	751.5	757.6
47.5°	634.7	653.0	685.5	712.9	723.0
50°	592.0	611.3	645.8	674.3	680.4
52.5°	549.4	569.7	606.2	636.7	639.8
55°	504.7	527.0	565.6	595.1	601.2
57.5°	464.1	483.4	525.0	555.5	562.6
60°	419.4	440.7	485.4	513.8	523.0
62.5°	376.7	399.1	445.8	474.2	482.4
65°	332.1	357.5	403.1	436.7	444.8
67.5°	293.5	317.8	366.6	399.1	407.2
70°	248.8	276.2	328.0	361.5	369.6
72.5°	210.2	238.6	290.4	322.9	335.1
75°	168.6	201.1	252.9	287.4	295.5
77.5°	128.0	165.5	218.3	244.7	244.7
80°	91.4	131.0	179.7	191.9	194.0
82.5°	59.9	98.5	133.0	132.0	132.0
85°	34.5	64.0	79.2	77.2	77.2
87.5°	13.2	26.4	28.4	28.4	27.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)