

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: P314255

Luminaire Tested: **24FCZ2-35-UNV-L83050-S-CP187-W2A-U-3000K**

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: P314255
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-3000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.187" POLYCARB SHEET
Light Source: (168) 3000K 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: 3022.0 lumens
Efficiency: N/A
Efficacy: 108.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

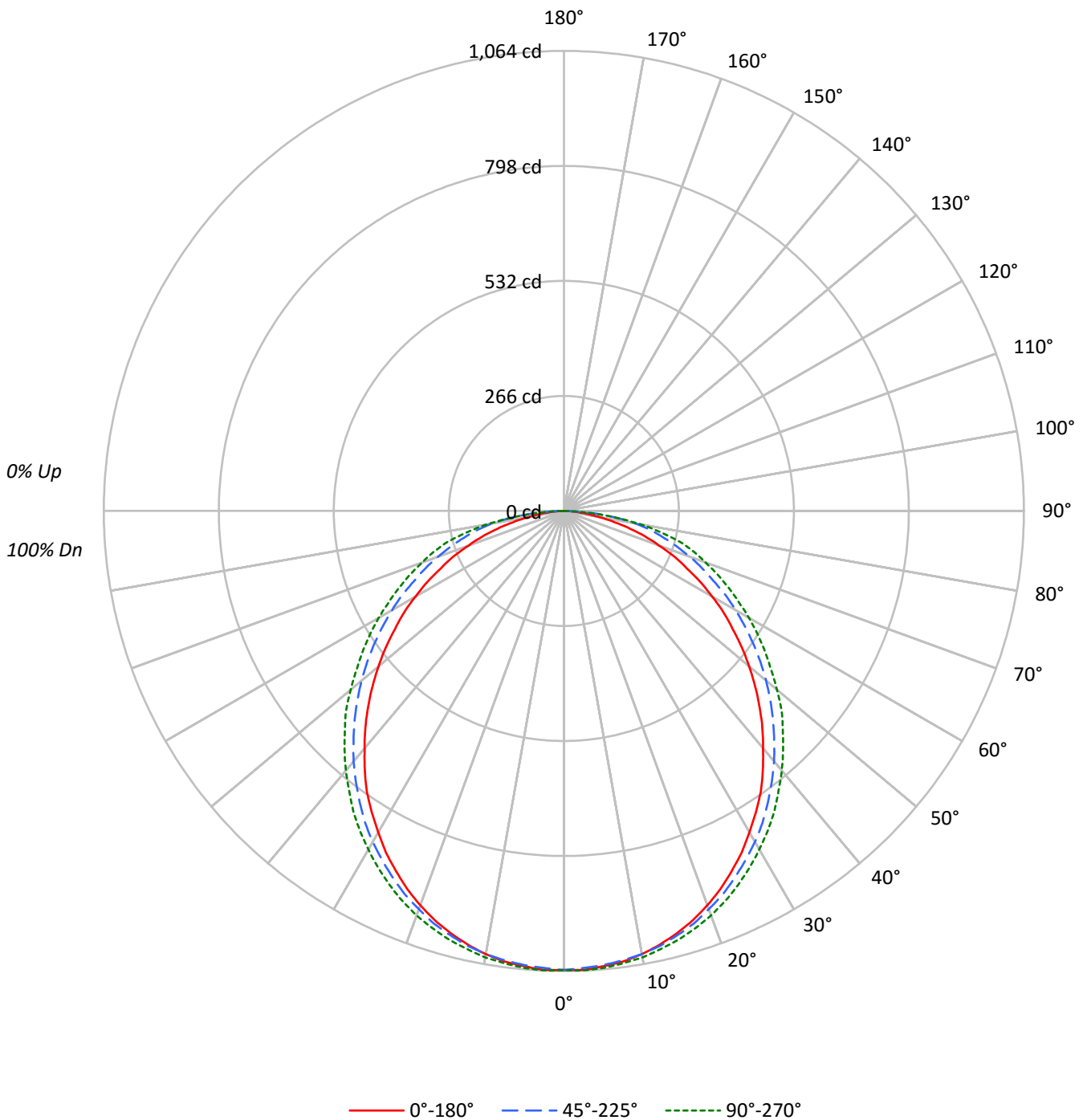
Input Watts (W): 27.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1428	1428	1428
5°	1427	1424	1433
10°	1422	1422	1432
15°	1408	1415	1429
20°	1390	1403	1425
25°	1364	1389	1416
30°	1333	1374	1405
35°	1304	1351	1394
40°	1259	1329	1377
45°	1218	1302	1363
50°	1171	1278	1346
55°	1119	1254	1333
60°	1067	1235	1330
65°	999	1213	1338
70°	925	1220	1375
75°	828	1242	1452
80°	669	1316	1420
85°	503	1156	1127



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	100.5	3.3
10°-20°	287.2	9.5
20°-30°	431.7	14.3
30°-40°	514.2	17.0
40°-50°	526.3	17.4
50°-60°	473.8	15.7
60°-70°	372.1	12.3
70°-80°	241.5	8.0
80°-90°	74.7	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°	819.4	27.1
0°-40°	1333.6	44.1
0°-60°	2333.7	77.2
0°-90°	3022.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3022.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1062	1062	1062	1062	1062	
5°	1057	1059	1054	1060	1061	100
15°	1011	1014	1016	1024	1026	285
25°	919	926	936	951	954	423
35°	794	803	823	843	849	495
45°	640	656	684	710	716	494
55°	477	498	535	562	568	428
65°	314	338	381	413	420	312
75°	159	190	239	272	279	169
85°	33	60	75	73	73	39
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1061.6	1061.6	1061.6	1061.6	1061.6
2.5°	1062.6	1062.6	1057.8	1062.6	1063.6
5°	1056.8	1058.8	1054.0	1059.7	1060.7
7.5°	1051.1	1051.1	1048.2	1054.0	1054.9
10°	1040.5	1041.5	1040.5	1047.2	1048.2
12.5°	1027.1	1029.0	1030.0	1036.7	1037.7
15°	1010.8	1013.7	1015.6	1024.2	1026.1
17.5°	992.5	995.4	1000.2	1009.8	1011.7
20°	970.5	974.3	980.1	992.5	995.4
22.5°	946.5	950.3	959.9	971.4	976.2
25°	918.6	926.3	935.9	951.3	954.1
27.5°	890.8	897.5	910.0	926.3	930.1
30°	858.1	868.7	884.1	900.4	904.2
32.5°	826.5	837.0	855.3	872.5	877.3
35°	793.8	803.4	822.6	842.8	848.6
37.5°	756.4	768.9	790.0	810.2	815.9
40°	717.0	732.4	756.4	777.5	784.2
42.5°	679.6	695.9	719.9	743.0	750.6
45°	640.3	655.6	684.4	710.3	716.1
47.5°	599.9	617.2	647.9	673.8	683.4
50°	559.6	577.9	610.5	637.4	643.1
52.5°	519.3	538.5	573.1	601.9	604.7
55°	477.1	498.2	534.7	562.5	568.3
57.5°	438.7	456.9	496.3	525.1	531.8
60°	396.4	416.6	458.8	485.7	494.3
62.5°	356.1	377.2	421.4	448.3	456.0
65°	313.9	337.9	381.1	412.8	420.4
67.5°	277.4	300.4	346.5	377.2	384.9
70°	235.2	261.1	310.0	341.7	349.4
72.5°	198.7	225.6	274.5	305.2	316.8
75°	159.3	190.1	239.0	271.7	279.3
77.5°	120.9	156.5	206.4	231.3	231.3
80°	86.4	123.8	169.9	181.4	183.3
82.5°	56.6	93.1	125.7	124.8	124.8
85°	32.6	60.5	74.9	73.0	73.0
87.5°	12.5	25.0	26.9	26.9	25.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)