

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: P314257

Luminaire Tested: **24FCZ2-35-UNV-L83050-S-CP187-W2A-U-4000K**

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: P314257
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-4000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.187" POLYCARB SHEET
Light Source: (168) 4000K 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: 3357.0 lumens
Efficiency: N/A
Efficacy: 117.4 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

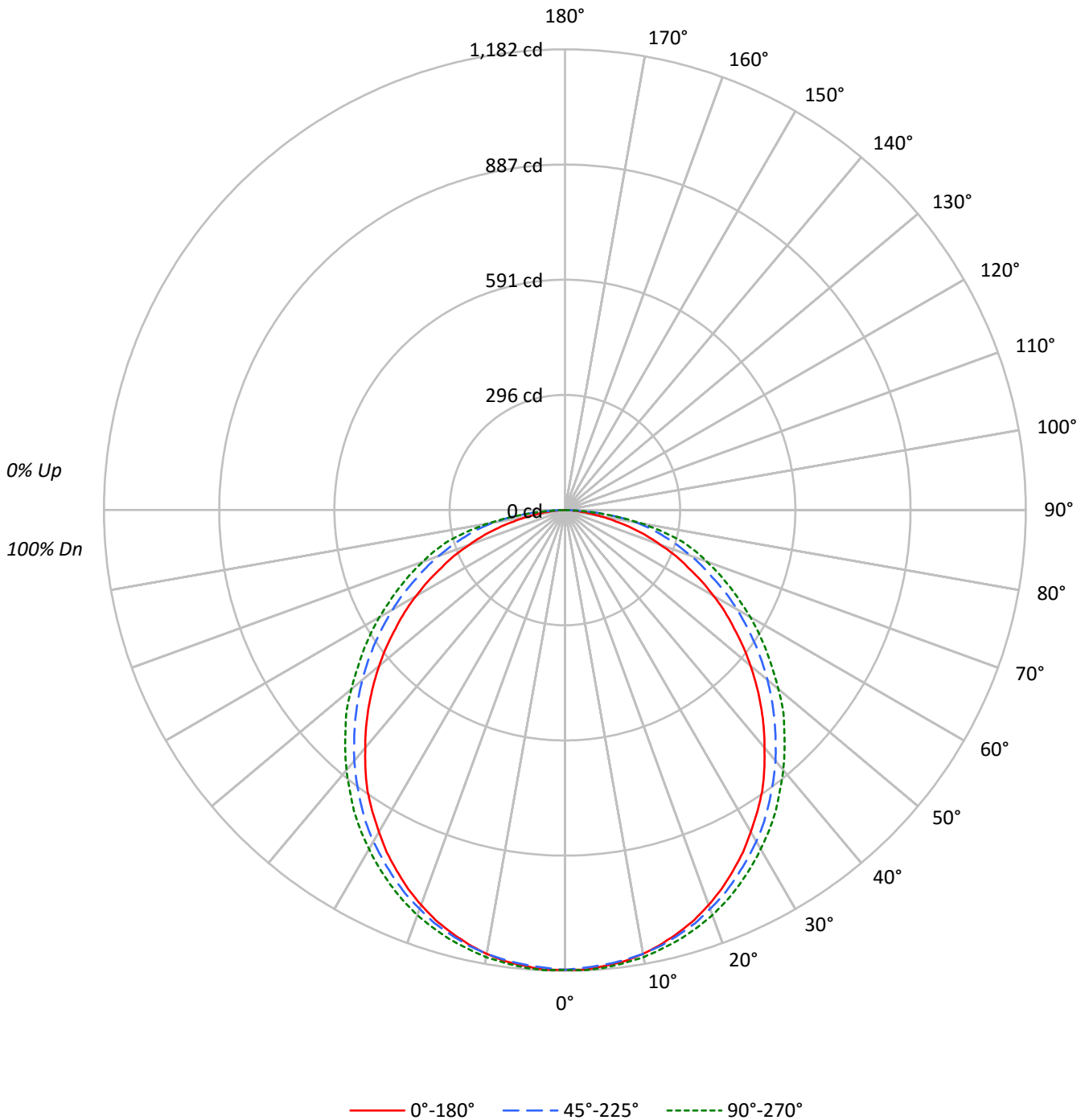
Input Watts (W): 28.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P314257

CATALOG NUMBER: 24FCZ2-35-UNV-L83050-S-CP187-W2A-U-4000K

Luminous Intensity Polar Plot





TEST NUMBER: P314257

CATALOG NUMBER: 24FCZ2-35-UNV-L83050-S-CP187-W2A-U-4000K

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°	1587	1587	1587
5°	1586	1581	1591
10°	1579	1579	1591
15°	1564	1572	1588
20°	1544	1559	1583
25°	1515	1543	1574
30°	1481	1526	1561
35°	1448	1501	1548
40°	1399	1476	1530
45°	1353	1447	1514
50°	1301	1420	1495
55°	1243	1393	1481
60°	1185	1372	1478
65°	1110	1348	1487
70°	1028	1355	1527
75°	920	1380	1613
80°	744	1462	1578
85°	560	1284	1250



TEST NUMBER: P314257

CATALOG NUMBER: 24FCZ2-35-UNV-L83050-S-CP187-W2A-U-4000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	111.6	3.3
10°-20°	319.0	9.5
20°-30°	479.6	14.3
30°-40°	571.2	17.0
40°-50°	584.6	17.4
50°-60°	526.3	15.7
60°-70°	413.3	12.3
70°-80°	268.3	8.0
80°-90°	83.0	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°	910.2	27.1
0°-40°	1481.5	44.1
0°-60°	2592.4	77.2
0°-90°	3357.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3357.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1179	1179	1179	1179	1179	
5°	1174	1176	1171	1177	1178	112
15°	1123	1126	1128	1138	1140	317
25°	1020	1029	1040	1057	1060	470
35°	882	892	914	936	943	550
45°	711	728	760	789	796	548
55°	530	553	594	625	631	475
65°	349	375	423	458	467	347
75°	177	211	266	302	310	187
85°	36	67	83	81	81	44
90°	0	0	0	0	0	



TEST NUMBER: P314257

CATALOG NUMBER: 24FCZ2-35-UNV-L83050-S-CP187-W2A-U-4000K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1179.3	1179.3	1179.3	1179.3	1179.3
2.5°	1180.4	1180.4	1175.1	1180.4	1181.5
5°	1174.0	1176.1	1170.8	1177.2	1178.3
7.5°	1167.6	1167.6	1164.4	1170.8	1171.9
10°	1155.9	1156.9	1155.9	1163.3	1164.4
12.5°	1140.9	1143.1	1144.1	1151.6	1152.7
15°	1122.8	1126.0	1128.2	1137.8	1139.9
17.5°	1102.6	1105.8	1111.1	1121.8	1123.9
20°	1078.0	1082.3	1088.7	1102.6	1105.8
22.5°	1051.4	1055.6	1066.3	1079.1	1084.4
25°	1020.5	1029.0	1039.6	1056.7	1059.9
27.5°	989.5	997.0	1010.9	1029.0	1033.3
30°	953.3	965.0	982.1	1000.2	1004.5
32.5°	918.1	929.8	950.1	969.3	974.6
35°	881.8	892.5	913.8	936.2	942.6
37.5°	840.3	854.1	877.6	900.0	906.4
40°	796.5	813.6	840.3	863.7	871.2
42.5°	754.9	773.1	799.7	825.3	833.9
45°	711.2	728.3	760.3	789.1	795.5
47.5°	666.4	685.6	719.8	748.5	759.2
50°	621.7	641.9	678.2	708.0	714.4
52.5°	576.9	598.2	636.6	668.6	671.8
55°	530.0	553.4	593.9	624.9	631.3
57.5°	487.3	507.6	551.3	583.3	590.7
60°	440.4	462.8	509.7	539.6	549.1
62.5°	395.6	419.1	468.1	498.0	506.5
65°	348.7	375.3	423.3	458.5	467.0
67.5°	308.2	333.8	384.9	419.1	427.6
70°	261.2	290.0	344.4	379.6	388.1
72.5°	220.7	250.6	305.0	339.1	351.9
75°	177.0	211.1	265.5	301.8	310.3
77.5°	134.4	173.8	229.3	257.0	257.0
80°	96.0	137.6	188.7	201.5	203.7
82.5°	62.9	103.4	139.7	138.6	138.6
85°	36.3	67.2	83.2	81.0	81.0
87.5°	13.9	27.7	29.9	29.9	28.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)