

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: P314259

Luminaire Tested: **24FCZ2-35-UNV-L83050-S-CP187-W2A-U-5000K**

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: P314259
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-5000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.187" POLYCARB SHEET
Light Source: (168) 5000K 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: 3389.0 lumens
Efficiency: N/A
Efficacy: 115.3 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

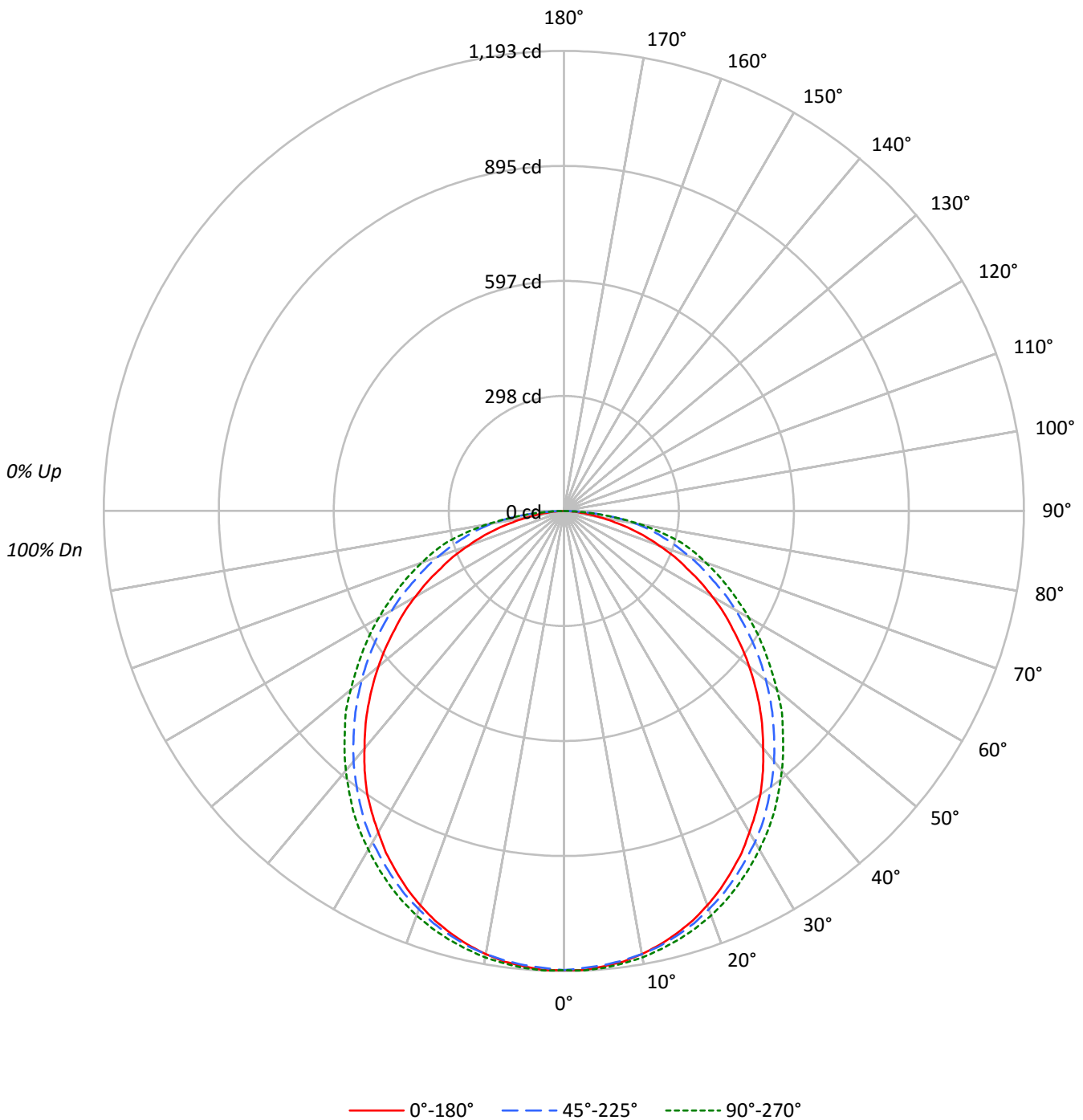
Input Watts (W): 29.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P314259

CATALOG NUMBER: 24FCZ2-35-UNV-L83050-S-CP187-W2A-U-5000K

Luminous Intensity Polar Plot





TEST NUMBER: P314259

CATALOG NUMBER: 24FCZ2-35-UNV-L83050-S-CP187-W2A-U-5000K

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°	1602	1602	1602
5°	1601	1596	1607
10°	1594	1594	1606
15°	1579	1586	1603
20°	1558	1574	1598
25°	1529	1558	1589
30°	1495	1540	1575
35°	1462	1515	1563
40°	1412	1490	1545
45°	1366	1460	1528
50°	1314	1433	1510
55°	1255	1407	1495
60°	1196	1385	1492
65°	1121	1361	1501
70°	1037	1368	1541
75°	929	1393	1629
80°	751	1476	1593
85°	565	1297	1263



TEST NUMBER: P314259

CATALOG NUMBER: 24FCZ2-35-UNV-L83050-S-CP187-W2A-U-5000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	112.7	3.3
10°-20°	322.1	9.5
20°-30°	484.1	14.3
30°-40°	576.7	17.0
40°-50°	590.2	17.4
50°-60°	531.4	15.7
60°-70°	417.3	12.3
70°-80°	270.8	8.0
80°-90°	83.8	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°	918.9	27.1
0°-40°	1495.6	44.1
0°-60°	2617.1	77.2
0°-90°	3389.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3389.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1191	1191	1191	1191	1191	
5°	1185	1187	1182	1188	1190	113
15°	1134	1137	1139	1149	1151	320
25°	1030	1039	1050	1067	1070	475
35°	890	901	922	945	952	555
45°	718	735	768	797	803	554
55°	535	559	600	631	637	480
65°	352	379	427	463	472	350
75°	179	213	268	305	313	189
85°	37	68	84	82	82	44
90°	0	0	0	0	0	



TEST NUMBER: P314259

CATALOG NUMBER: 24FCZ2-35-UNV-L83050-S-CP187-W2A-U-5000K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1190.6	1190.6	1190.6	1190.6	1190.6
2.5°	1191.7	1191.7	1186.3	1191.7	1192.7
5°	1185.2	1187.3	1182.0	1188.4	1189.5
7.5°	1178.7	1178.7	1175.5	1182.0	1183.0
10°	1166.9	1168.0	1166.9	1174.4	1175.5
12.5°	1151.8	1154.0	1155.1	1162.6	1163.7
15°	1133.5	1136.8	1138.9	1148.6	1150.7
17.5°	1113.1	1116.3	1121.7	1132.4	1134.6
20°	1088.3	1092.6	1099.1	1113.1	1116.3
22.5°	1061.4	1065.7	1076.5	1089.4	1094.8
25°	1030.2	1038.8	1049.6	1066.8	1070.0
27.5°	999.0	1006.5	1020.5	1038.8	1043.1
30°	962.4	974.2	991.4	1009.7	1014.0
32.5°	926.8	938.7	959.1	978.5	983.9
35°	890.2	901.0	922.5	945.1	951.6
37.5°	848.3	862.3	885.9	908.5	915.0
40°	804.1	821.3	848.3	871.9	879.5
42.5°	762.1	780.4	807.4	833.2	841.8
45°	718.0	735.2	767.5	796.6	803.0
47.5°	672.8	692.2	726.6	755.7	766.4
50°	627.6	648.0	684.6	714.8	721.2
52.5°	582.4	603.9	642.7	674.9	678.2
55°	535.0	558.7	599.6	630.8	637.3
57.5°	491.9	512.4	556.5	588.8	596.4
60°	444.6	467.2	514.6	544.7	554.4
62.5°	399.4	423.1	472.6	502.7	511.3
65°	352.0	378.9	427.4	462.9	471.5
67.5°	311.1	336.9	388.6	423.1	431.7
70°	263.7	292.8	347.7	383.2	391.8
72.5°	222.8	253.0	307.9	342.3	355.2
75°	178.7	213.1	268.0	304.6	313.3
77.5°	135.6	175.5	231.4	259.4	259.4
80°	96.9	138.9	190.5	203.5	205.6
82.5°	63.5	104.4	141.0	139.9	139.9
85°	36.6	67.8	84.0	81.8	81.8
87.5°	14.0	28.0	30.1	30.1	29.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)