

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: P314243

Luminaire Tested: **24FCZ2-35-UNV-L83050-S-CA08-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: P314243
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-CA08-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.08" 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

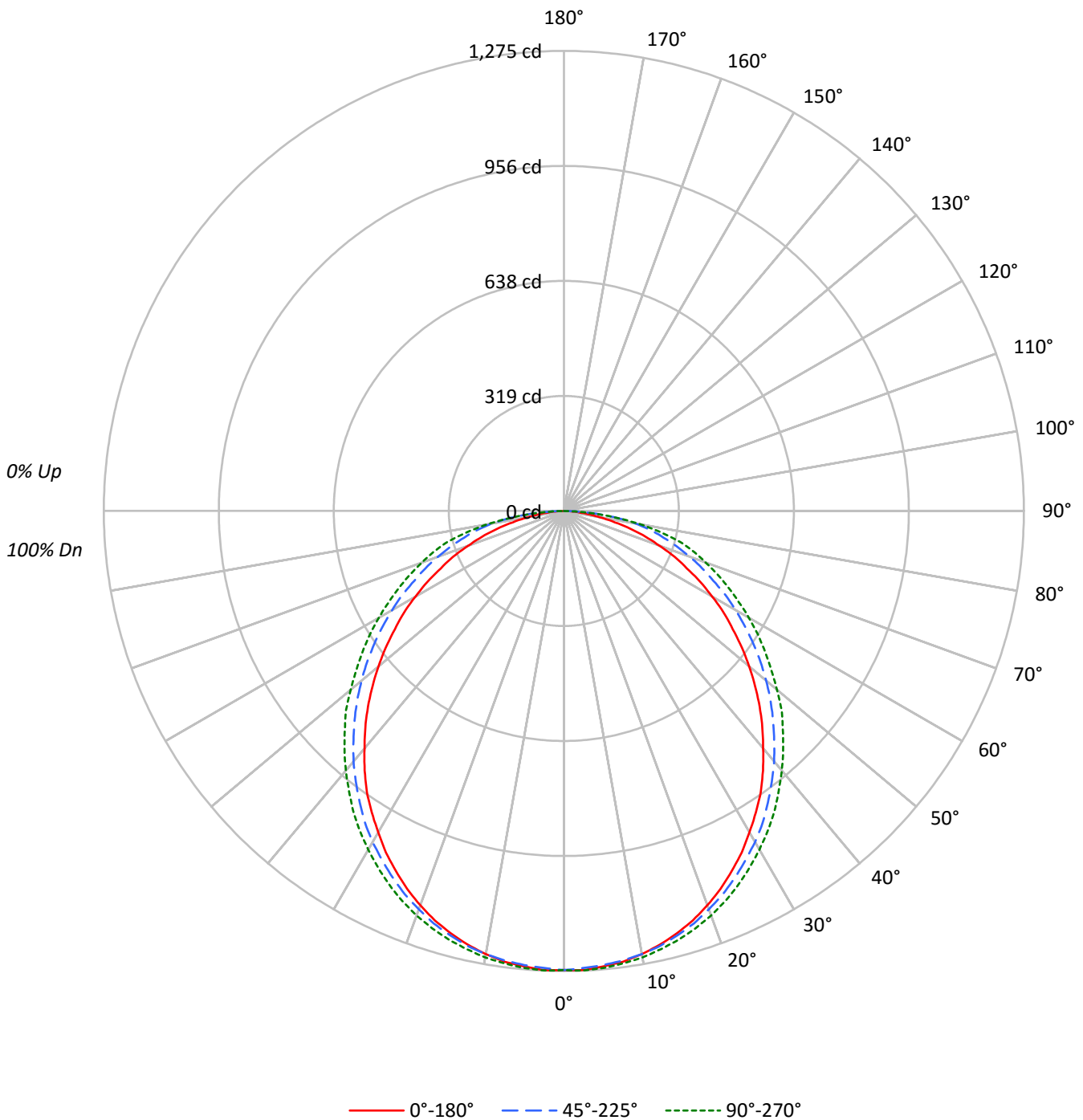
Lumens per Lamp: N/A
Luminaire Lumens: 3622.0 lumens
Efficiency: N/A
Efficacy: 123.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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: P314243
CATALOG NUMBER: 24FCZ2-35-UNV-L83050-S-CA08-W2A-U-4500K

Luminous Intensity Polar Plot





TEST NUMBER: P314243

CATALOG NUMBER: 24FCZ2-35-UNV-L83050-S-CA08-W2A-U-4500K

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°	1712	1712	1712
5°	1711	1706	1717
10°	1704	1704	1716
15°	1688	1696	1713
20°	1665	1682	1708
25°	1635	1665	1698
30°	1598	1646	1684
35°	1563	1620	1670
40°	1509	1592	1651
45°	1460	1561	1633
50°	1404	1532	1613
55°	1341	1503	1598
60°	1278	1480	1594
65°	1198	1454	1604
70°	1109	1462	1648
75°	993	1489	1740
80°	802	1578	1702
85°	604	1385	1349



TEST NUMBER: P314243

CATALOG NUMBER: 24FCZ2-35-UNV-L83050-S-CA08-W2A-U-4500K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	120.5	3.3
10°-20°	344.2	9.5
20°-30°	517.4	14.3
30°-40°	616.3	17.0
40°-50°	630.8	17.4
50°-60°	567.9	15.7
60°-70°	446.0	12.3
70°-80°	289.5	8.0
80°-90°	89.5	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°	982.1	27.1
0°-40°	1598.4	44.1
0°-60°	2797.1	77.2
0°-90°	3622.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3622.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1272	1272	1272	1272	1272	
5°	1267	1269	1263	1270	1271	120
15°	1212	1215	1217	1228	1230	342
25°	1101	1110	1122	1140	1144	507
35°	951	963	986	1010	1017	594
45°	767	786	820	851	858	592
55°	572	597	641	674	681	513
65°	376	405	457	495	504	374
75°	191	228	286	326	335	202
85°	39	72	90	87	87	47
90°	0	0	0	0	0	



TEST NUMBER: P314243

CATALOG NUMBER: 24FCZ2-35-UNV-L83050-S-CA08-W2A-U-4500K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1272.4	1272.4	1272.4	1272.4	1272.4
2.5°	1273.6	1273.6	1267.8	1273.6	1274.7
5°	1266.7	1269.0	1263.2	1270.1	1271.3
7.5°	1259.8	1259.8	1256.3	1263.2	1264.4
10°	1247.1	1248.3	1247.1	1255.2	1256.3
12.5°	1231.0	1233.3	1234.5	1242.5	1243.7
15°	1211.5	1214.9	1217.2	1227.6	1229.9
17.5°	1189.6	1193.0	1198.8	1210.3	1212.6
20°	1163.1	1167.7	1174.6	1189.6	1193.0
22.5°	1134.4	1139.0	1150.5	1164.3	1170.0
25°	1101.0	1110.2	1121.7	1140.1	1143.6
27.5°	1067.6	1075.7	1090.7	1110.2	1114.8
30°	1028.5	1041.2	1059.6	1079.2	1083.8
32.5°	990.6	1003.2	1025.1	1045.8	1051.5
35°	951.4	963.0	986.0	1010.1	1017.0
37.5°	906.6	921.5	946.8	971.0	977.9
40°	859.4	877.8	906.6	931.9	939.9
42.5°	814.5	834.1	862.9	890.5	899.7
45°	767.4	785.8	820.3	851.4	858.3
47.5°	719.1	739.8	776.6	807.6	819.1
50°	670.7	692.6	731.7	763.9	770.8
52.5°	622.4	645.4	686.8	721.4	724.8
55°	571.8	597.1	640.8	674.2	681.1
57.5°	525.8	547.6	594.8	629.3	637.4
60°	475.1	499.3	549.9	582.1	592.5
62.5°	426.8	452.1	505.1	537.3	546.5
65°	376.2	405.0	456.7	494.7	503.9
67.5°	332.5	360.1	415.3	452.1	461.3
70°	281.9	312.9	371.6	409.6	418.8
72.5°	238.1	270.4	329.0	365.9	379.7
75°	191.0	227.8	286.5	325.6	334.8
77.5°	145.0	187.5	247.4	277.3	277.3
80°	103.5	148.4	203.6	217.4	219.7
82.5°	67.9	111.6	150.7	149.6	149.6
85°	39.1	72.5	89.7	87.4	87.4
87.5°	15.0	29.9	32.2	32.2	31.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)