

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: P314254

Luminaire Tested: **24FCZ2-35-UNV-L83050-S-CP125-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: P314254
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-CP125-W2A-U-5000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" 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: 3539.0 lumens
Efficiency: N/A
Efficacy: 120.4 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

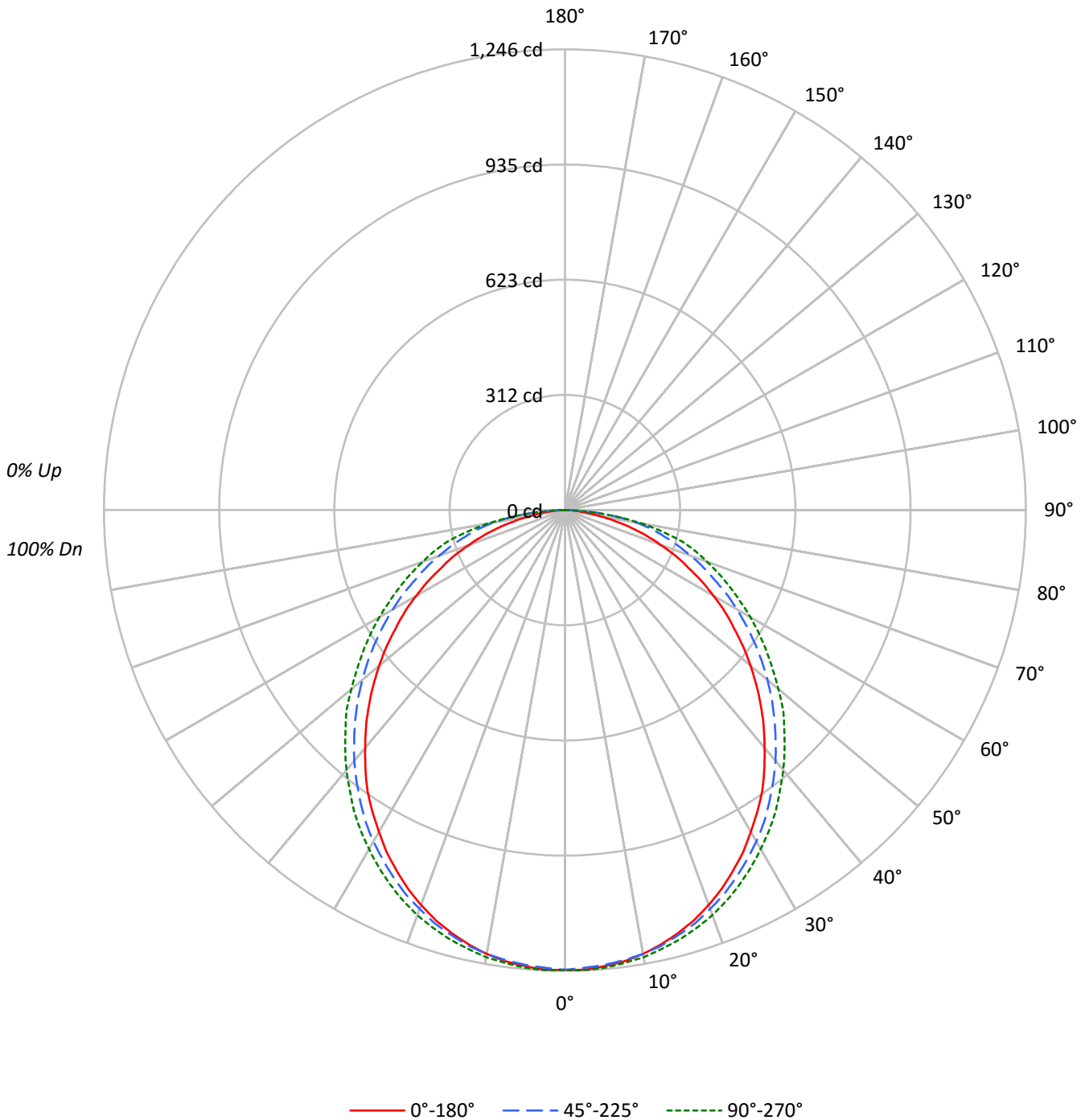
Input Watts (W): 29.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1673	1673	1673
5°	1672	1667	1678
10°	1665	1665	1677
15°	1649	1657	1674
20°	1627	1643	1669
25°	1597	1627	1659
30°	1561	1608	1645
35°	1527	1582	1632
40°	1475	1556	1613
45°	1427	1525	1596
50°	1372	1496	1577
55°	1311	1469	1561
60°	1249	1446	1558
65°	1170	1421	1568
70°	1083	1428	1610
75°	970	1455	1700
80°	784	1542	1664
85°	590	1354	1318



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	117.7	3.3
10°-20°	336.3	9.5
20°-30°	505.6	14.3
30°-40°	602.2	17.0
40°-50°	616.3	17.4
50°-60°	554.9	15.7
60°-70°	435.8	12.3
70°-80°	282.8	8.0
80°-90°	87.5	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°	959.6	27.1
0°-40°	1561.8	44.1
0°-60°	2733.0	77.2
0°-90°	3539.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3539.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1243	1243	1243	1243	1243	
5°	1238	1240	1234	1241	1242	118
15°	1184	1187	1189	1199	1202	334
25°	1076	1085	1096	1114	1117	496
35°	930	941	963	987	994	580
45°	750	768	802	832	839	578
55°	559	583	626	659	666	501
65°	368	396	446	483	492	366
75°	187	223	280	318	327	197
85°	38	71	88	85	85	46
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1243.3	1243.3	1243.3	1243.3	1243.3
2.5°	1244.4	1244.4	1238.8	1244.4	1245.5
5°	1237.7	1239.9	1234.3	1241.0	1242.1
7.5°	1230.9	1230.9	1227.5	1234.3	1235.4
10°	1218.5	1219.7	1218.5	1226.4	1227.5
12.5°	1202.8	1205.1	1206.2	1214.0	1215.2
15°	1183.7	1187.1	1189.3	1199.4	1201.7
17.5°	1162.3	1165.7	1171.3	1182.6	1184.8
20°	1136.5	1141.0	1147.7	1162.3	1165.7
22.5°	1108.4	1112.9	1124.1	1137.6	1143.2
25°	1075.8	1084.8	1096.0	1114.0	1117.4
27.5°	1043.2	1051.0	1065.7	1084.8	1089.3
30°	1005.0	1017.3	1035.3	1054.4	1058.9
32.5°	967.9	980.2	1001.6	1021.8	1027.4
35°	929.6	940.9	963.4	987.0	993.7
37.5°	885.8	900.4	925.1	948.8	955.5
40°	839.7	857.7	885.8	910.5	918.4
42.5°	795.9	815.0	843.1	870.1	879.1
45°	749.8	767.8	801.5	831.8	838.6
47.5°	702.6	722.8	758.8	789.1	800.4
50°	655.4	676.7	714.9	746.4	753.2
52.5°	608.1	630.6	671.1	704.8	708.2
55°	558.7	583.4	626.1	658.7	665.5
57.5°	513.7	535.1	581.2	614.9	622.8
60°	464.3	487.9	537.3	568.8	578.9
62.5°	417.0	441.8	493.5	525.0	534.0
65°	367.6	395.7	446.3	483.4	492.4
67.5°	324.9	351.8	405.8	441.8	450.8
70°	275.4	305.8	363.1	400.2	409.2
72.5°	232.7	264.2	321.5	357.5	371.0
75°	186.6	222.6	279.9	318.1	327.1
77.5°	141.6	183.2	241.7	270.9	270.9
80°	101.2	145.0	199.0	212.5	214.7
82.5°	66.3	109.0	147.3	146.1	146.1
85°	38.2	70.8	87.7	85.4	85.4
87.5°	14.6	29.2	31.5	31.5	30.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)