

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: P314345

Luminaire Tested: **24FCZ2-45-UNV-L83050-S-CA125-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: P314345
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: 24FCZ2-45-UNV-L83050-S-CA125-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" ACRYLIC 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: 4100.0 lumens
Efficiency: N/A
Efficacy: 109.3 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

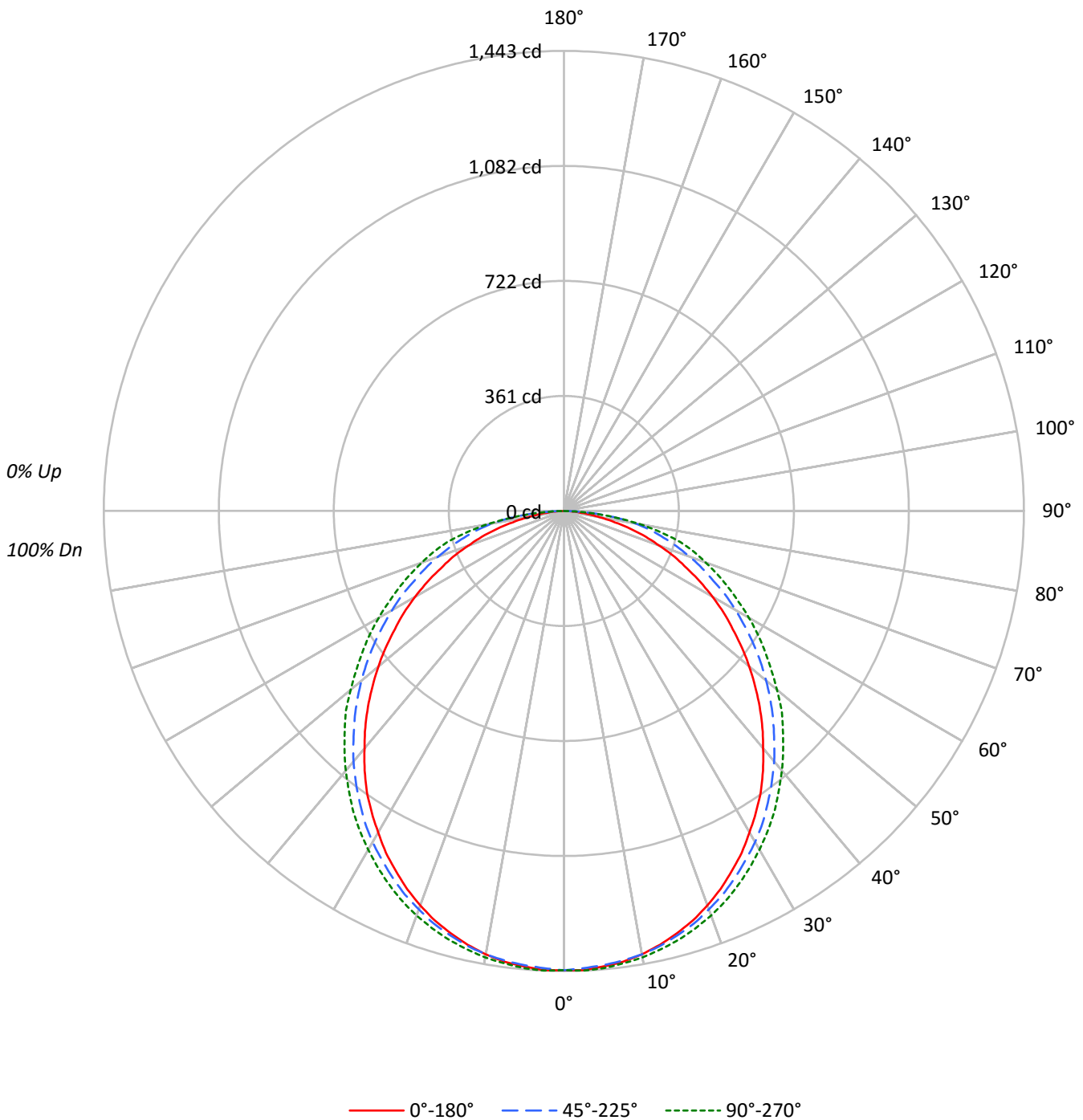
Input Watts (W): 37.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1938	1938	1938
5°	1937	1931	1944
10°	1929	1929	1943
15°	1910	1919	1939
20°	1885	1904	1934
25°	1850	1885	1922
30°	1809	1863	1906
35°	1769	1833	1891
40°	1709	1802	1869
45°	1653	1767	1849
50°	1589	1734	1826
55°	1518	1702	1809
60°	1447	1675	1805
65°	1356	1646	1816
70°	1255	1655	1865
75°	1124	1686	1970
80°	908	1786	1927
85°	684	1568	1528



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	136.4	3.3
10°-20°	389.6	9.5
20°-30°	585.7	14.3
30°-40°	697.7	17.0
40°-50°	714.0	17.4
50°-60°	642.8	15.7
60°-70°	504.8	12.3
70°-80°	327.7	8.0
80°-90°	101.3	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°	1111.7	27.1
0°-40°	1809.3	44.1
0°-60°	3166.2	77.2
0°-90°	4100.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4100.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1440	1440	1440	1440	1440	
5°	1434	1436	1430	1438	1439	136
15°	1371	1375	1378	1390	1392	387
25°	1246	1257	1270	1291	1294	574
35°	1077	1090	1116	1143	1151	672
45°	869	890	928	964	972	670
55°	647	676	725	763	771	580
65°	426	458	517	560	570	424
75°	216	258	324	369	379	229
85°	44	82	102	99	99	53
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1440.4	1440.4	1440.4	1440.4	1440.4
2.5°	1441.7	1441.7	1435.1	1441.7	1443.0
5°	1433.8	1436.4	1429.9	1437.8	1439.1
7.5°	1426.0	1426.0	1422.1	1429.9	1431.2
10°	1411.7	1413.0	1411.7	1420.8	1422.1
12.5°	1393.5	1396.1	1397.4	1406.5	1407.8
15°	1371.3	1375.2	1377.8	1389.6	1392.2
17.5°	1346.6	1350.5	1357.0	1370.0	1372.6
20°	1316.6	1321.8	1329.7	1346.6	1350.5
22.5°	1284.1	1289.3	1302.3	1317.9	1324.5
25°	1246.3	1256.7	1269.8	1290.6	1294.5
27.5°	1208.5	1217.7	1234.6	1256.7	1261.9
30°	1164.3	1178.6	1199.4	1221.6	1226.8
32.5°	1121.3	1135.6	1160.4	1183.8	1190.3
35°	1077.0	1090.0	1116.1	1143.4	1151.2
37.5°	1026.2	1043.2	1071.8	1099.2	1107.0
40°	972.8	993.7	1026.2	1054.9	1064.0
42.5°	922.0	944.2	976.7	1008.0	1018.4
45°	868.6	889.5	928.5	963.7	971.5
47.5°	813.9	837.4	879.1	914.2	927.2
50°	759.2	784.0	828.3	864.7	872.5
52.5°	704.6	730.6	777.5	816.5	820.5
55°	647.2	675.9	725.4	763.2	771.0
57.5°	595.2	619.9	673.3	712.4	721.5
60°	537.9	565.2	622.5	659.0	670.7
62.5°	483.2	511.8	571.7	608.2	618.6
65°	425.9	458.4	517.0	560.0	570.4
67.5°	376.4	407.6	470.1	511.8	522.2
70°	319.1	354.2	420.6	463.6	474.0
72.5°	269.6	306.0	372.5	414.1	429.8
75°	216.2	257.9	324.3	368.6	379.0
77.5°	164.1	212.3	280.0	313.9	313.9
80°	117.2	168.0	230.5	246.1	248.7
82.5°	76.8	126.3	170.6	169.3	169.3
85°	44.3	82.0	101.6	99.0	99.0
87.5°	16.9	33.9	36.5	36.5	35.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)