

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: P314360

Luminaire Tested: **24FCZ2-45-UNV-L83050-S-CP250-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: P314360
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-CP250-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.250" POLYCARB 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: 3818.0 lumens
Efficiency: N/A
Efficacy: 101.8 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

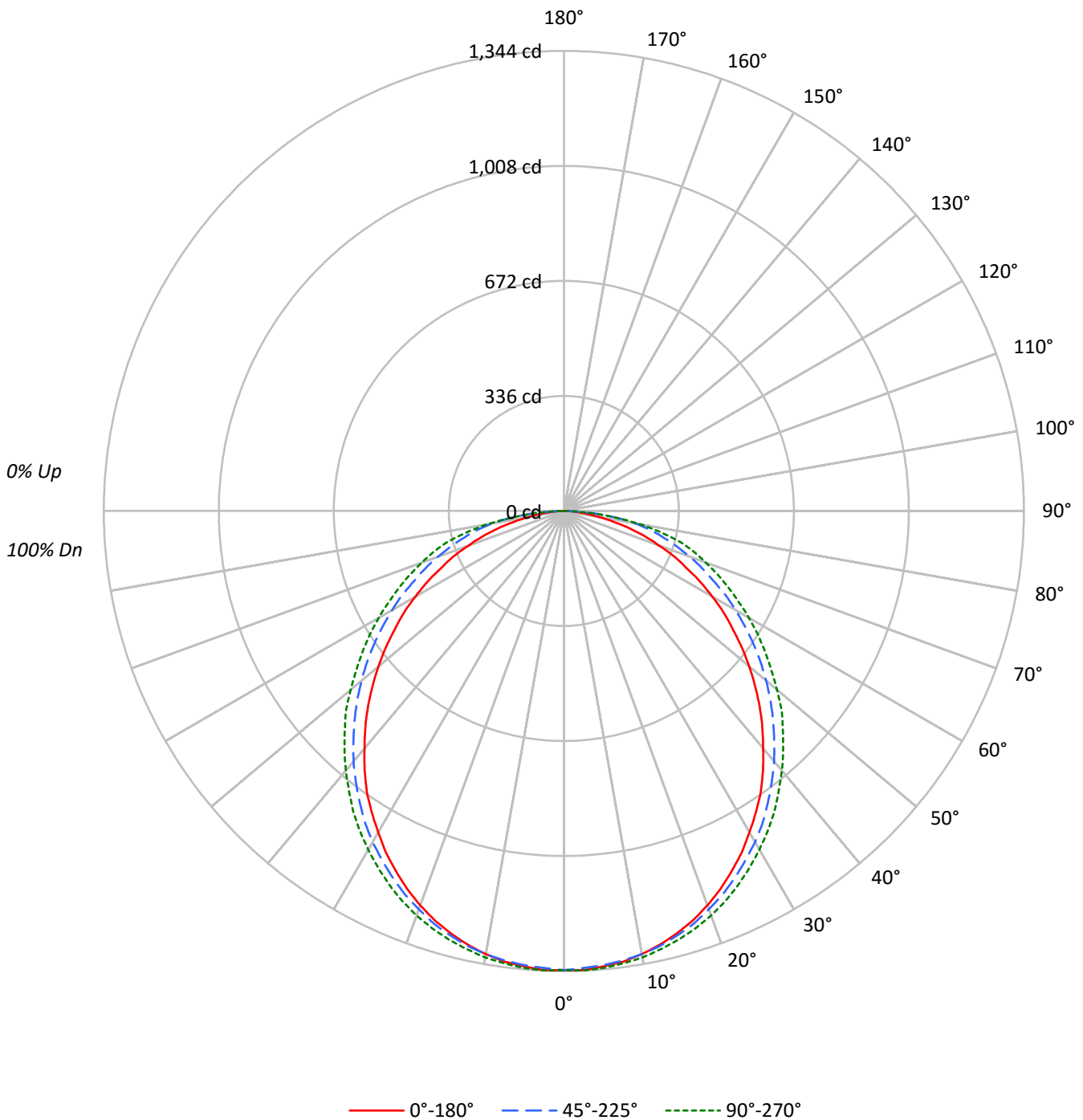
Input Watts (W): 37.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1805	1805	1805
5°	1803	1798	1810
10°	1796	1796	1809
15°	1779	1787	1806
20°	1756	1773	1801
25°	1723	1755	1790
30°	1684	1735	1775
35°	1647	1707	1761
40°	1591	1678	1740
45°	1539	1645	1721
50°	1480	1614	1701
55°	1414	1585	1684
60°	1348	1560	1681
65°	1263	1533	1691
70°	1169	1541	1736
75°	1046	1570	1835
80°	845	1664	1795
85°	636	1460	1423



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	127.0	3.3
10°-20°	362.8	9.5
20°-30°	545.4	14.3
30°-40°	649.7	17.0
40°-50°	664.9	17.4
50°-60°	598.6	15.7
60°-70°	470.1	12.3
70°-80°	305.1	8.0
80°-90°	94.4	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°	1035.2	27.1
0°-40°	1684.9	44.1
0°-60°	2948.4	77.2
0°-90°	3818.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3818.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1341	1341	1341	1341	1341	
5°	1335	1338	1332	1339	1340	127
15°	1277	1281	1283	1294	1296	360
25°	1161	1170	1182	1202	1206	535
35°	1003	1015	1039	1065	1072	626
45°	809	828	865	897	905	624
55°	603	629	676	711	718	540
65°	397	427	482	522	531	395
75°	201	240	302	343	353	213
85°	41	76	95	92	92	50
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1341.3	1341.3	1341.3	1341.3	1341.3
2.5°	1342.5	1342.5	1336.4	1342.5	1343.7
5°	1335.2	1337.7	1331.6	1338.9	1340.1
7.5°	1327.9	1327.9	1324.3	1331.6	1332.8
10°	1314.6	1315.8	1314.6	1323.1	1324.3
12.5°	1297.6	1300.1	1301.3	1309.8	1311.0
15°	1277.0	1280.7	1283.1	1294.0	1296.4
17.5°	1254.0	1257.6	1263.7	1275.8	1278.2
20°	1226.1	1230.9	1238.2	1254.0	1257.6
22.5°	1195.8	1200.6	1212.7	1227.3	1233.4
25°	1160.6	1170.3	1182.4	1201.8	1205.5
27.5°	1125.4	1133.9	1149.7	1170.3	1175.1
30°	1084.2	1097.5	1116.9	1137.5	1142.4
32.5°	1044.2	1057.5	1080.5	1102.4	1108.4
35°	1002.9	1015.1	1039.3	1064.8	1072.1
37.5°	955.6	971.4	998.1	1023.6	1030.8
40°	905.9	925.3	955.6	982.3	990.8
42.5°	858.6	879.2	909.6	938.7	948.4
45°	808.9	828.3	864.7	897.4	904.7
47.5°	758.0	779.8	818.6	851.3	863.5
50°	707.0	730.1	771.3	805.3	812.5
52.5°	656.1	680.3	724.0	760.4	764.0
55°	602.7	629.4	675.5	710.7	717.9
57.5°	554.2	577.3	627.0	663.4	671.9
60°	500.9	526.3	579.7	613.6	624.6
62.5°	449.9	476.6	532.4	566.3	576.1
65°	396.6	426.9	481.5	521.5	531.2
67.5°	350.5	379.6	437.8	476.6	486.3
70°	297.1	329.9	391.7	431.7	441.4
72.5°	251.0	285.0	346.8	385.7	400.2
75°	201.3	240.1	302.0	343.2	352.9
77.5°	152.8	197.7	260.7	292.3	292.3
80°	109.1	156.4	214.7	229.2	231.6
82.5°	71.6	117.6	158.9	157.7	157.7
85°	41.2	76.4	94.6	92.2	92.2
87.5°	15.8	31.5	34.0	34.0	32.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)