

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: P314299

Luminaire Tested: **24FCZ2-40-UNV-L83050-S-CA125-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: P314299
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: 24FCZ2-40-UNV-L83050-S-CA125-W2A-U-5000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" ACRYLIC 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: 4107.0 lumens
Efficiency: N/A
Efficacy: 119.7 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

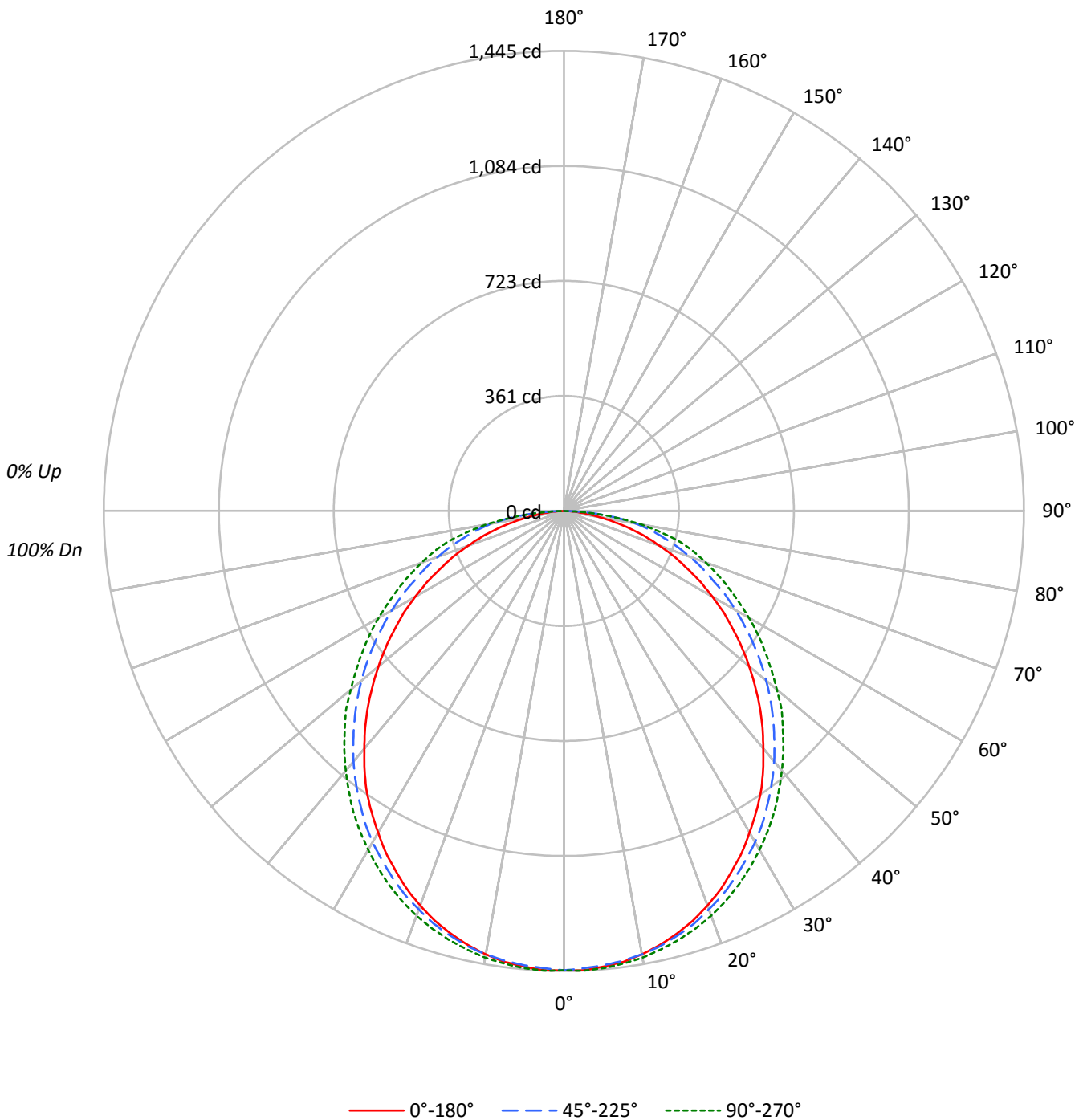
Input Watts (W): 34.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1941	1941	1941
5°	1940	1935	1947
10°	1932	1932	1946
15°	1913	1923	1942
20°	1888	1907	1937
25°	1853	1888	1925
30°	1812	1867	1909
35°	1772	1836	1894
40°	1712	1806	1872
45°	1656	1770	1852
50°	1592	1737	1829
55°	1521	1704	1812
60°	1450	1678	1808
65°	1358	1649	1819
70°	1257	1658	1868
75°	1126	1688	1973
80°	910	1789	1931
85°	685	1572	1530



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	136.6	3.3
10°-20°	390.3	9.5
20°-30°	586.7	14.3
30°-40°	698.9	17.0
40°-50°	715.2	17.4
50°-60°	643.9	15.7
60°-70°	505.7	12.3
70°-80°	328.2	8.0
80°-90°	101.5	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°	1113.6	27.1
0°-40°	1812.4	44.1
0°-60°	3171.6	77.2
0°-90°	4107.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4107.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1443	1443	1443	1443	1443	
5°	1436	1439	1432	1440	1442	136
15°	1374	1378	1380	1392	1394	387
25°	1248	1259	1272	1293	1297	575
35°	1079	1092	1118	1145	1153	673
45°	870	891	930	965	973	671
55°	648	677	727	764	772	581
65°	427	459	518	561	571	425
75°	217	258	325	369	380	229
85°	44	82	102	99	99	54
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1442.8	1442.8	1442.8	1442.8	1442.8
2.5°	1444.1	1444.1	1437.6	1444.1	1445.4
5°	1436.3	1438.9	1432.4	1440.2	1441.5
7.5°	1428.5	1428.5	1424.6	1432.4	1433.7
10°	1414.1	1415.4	1414.1	1423.2	1424.6
12.5°	1395.9	1398.5	1399.8	1408.9	1410.2
15°	1373.7	1377.6	1380.2	1391.9	1394.5
17.5°	1348.9	1352.8	1359.3	1372.4	1375.0
20°	1318.9	1324.1	1331.9	1348.9	1352.8
22.5°	1286.3	1291.5	1304.5	1320.2	1326.7
25°	1248.4	1258.9	1271.9	1292.8	1296.7
27.5°	1210.6	1219.7	1236.7	1258.9	1264.1
30°	1166.3	1180.6	1201.5	1223.7	1228.9
32.5°	1123.2	1137.6	1162.3	1185.8	1192.3
35°	1078.9	1091.9	1118.0	1145.4	1153.2
37.5°	1028.0	1044.9	1073.6	1101.0	1108.9
40°	974.5	995.4	1028.0	1056.7	1065.8
42.5°	923.6	945.8	978.4	1009.7	1020.1
45°	870.1	891.0	930.1	965.4	973.2
47.5°	815.3	838.8	880.6	915.8	928.8
50°	760.5	785.3	829.7	866.2	874.0
52.5°	705.8	731.8	778.8	817.9	821.9
55°	648.4	677.1	726.6	764.5	772.3
57.5°	596.2	621.0	674.4	713.6	722.7
60°	538.8	566.2	623.6	660.1	671.8
62.5°	484.0	512.7	572.7	609.2	619.7
65°	426.6	459.2	517.9	561.0	571.4
67.5°	377.0	408.3	470.9	512.7	523.1
70°	319.6	354.8	421.4	464.4	474.9
72.5°	270.0	306.6	373.1	414.8	430.5
75°	216.6	258.3	324.8	369.2	379.6
77.5°	164.4	212.6	280.5	314.4	314.4
80°	117.4	168.3	230.9	246.6	249.2
82.5°	77.0	126.5	170.9	169.6	169.6
85°	44.4	82.2	101.8	99.1	99.1
87.5°	17.0	33.9	36.5	36.5	35.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)