

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: P314304

Luminaire Tested: **24FCZ2-40-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: P314304
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-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: 4027.0 lumens
Efficiency: N/A
Efficacy: 117.4 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

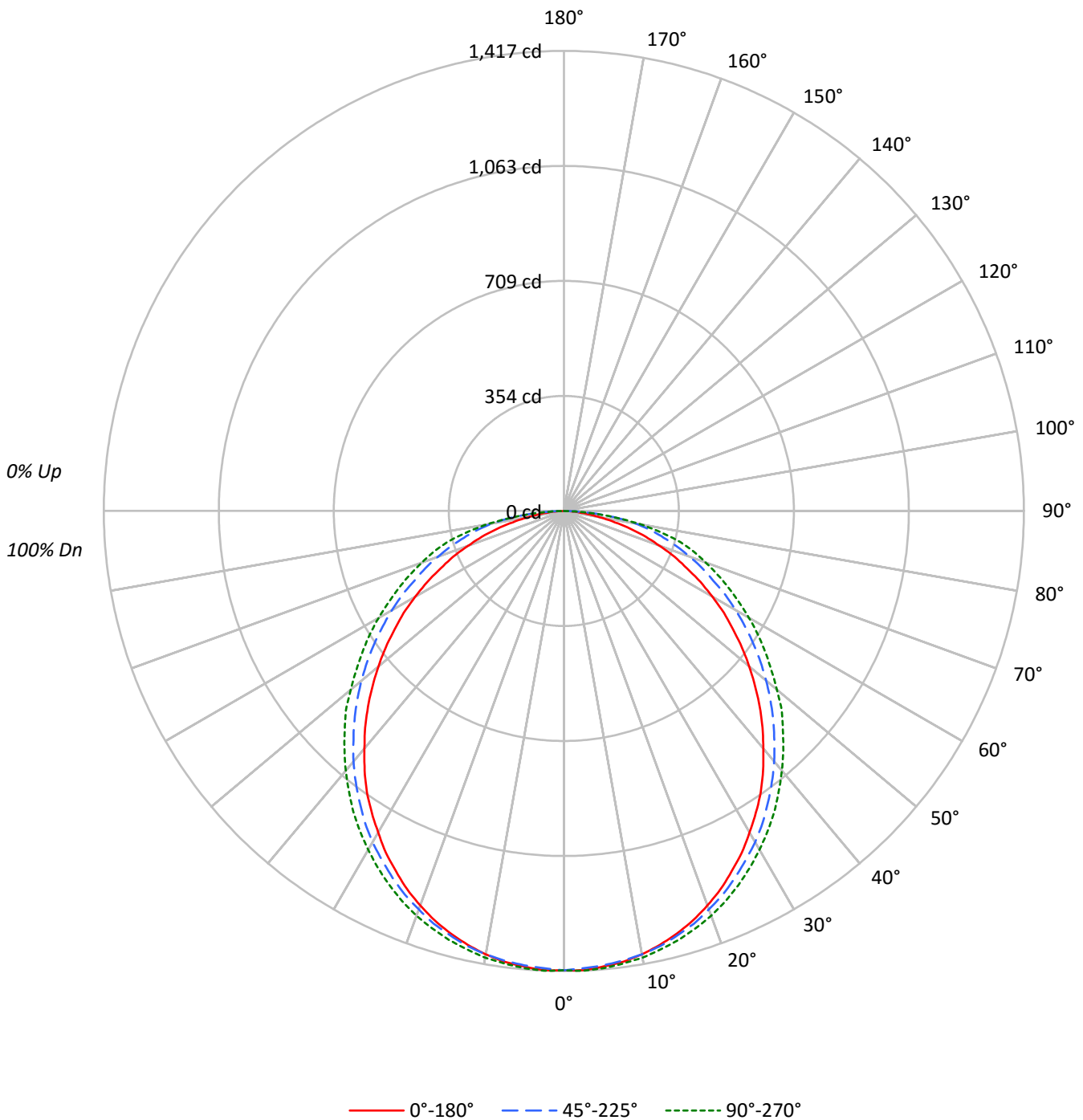
Input Watts (W): 34.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1903	1903	1903
5°	1902	1897	1909
10°	1894	1894	1908
15°	1876	1885	1905
20°	1852	1870	1899
25°	1817	1851	1887
30°	1777	1830	1872
35°	1737	1801	1857
40°	1678	1770	1835
45°	1623	1735	1816
50°	1561	1703	1794
55°	1491	1671	1776
60°	1422	1645	1773
65°	1332	1617	1784
70°	1233	1626	1832
75°	1104	1656	1935
80°	892	1754	1893
85°	672	1541	1501



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	133.9	3.3
10°-20°	382.7	9.5
20°-30°	575.3	14.3
30°-40°	685.2	17.0
40°-50°	701.3	17.4
50°-60°	631.4	15.7
60°-70°	495.8	12.3
70°-80°	321.8	8.0
80°-90°	99.5	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°	1091.9	27.1
0°-40°	1777.1	44.1
0°-60°	3109.8	77.2
0°-90°	4027.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4027.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1415	1415	1415	1415	1415	
5°	1408	1411	1404	1412	1413	134
15°	1347	1351	1353	1365	1367	380
25°	1224	1234	1247	1268	1271	564
35°	1058	1071	1096	1123	1131	660
45°	853	874	912	947	954	658
55°	636	664	712	750	757	570
65°	418	450	508	550	560	416
75°	212	253	318	362	372	225
85°	44	81	100	97	97	53
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1414.7	1414.7	1414.7	1414.7	1414.7
2.5°	1416.0	1416.0	1409.6	1416.0	1417.3
5°	1408.3	1410.9	1404.5	1412.2	1413.4
7.5°	1400.6	1400.6	1396.8	1404.5	1405.8
10°	1386.6	1387.8	1386.6	1395.5	1396.8
12.5°	1368.7	1371.2	1372.5	1381.5	1382.7
15°	1346.9	1350.8	1353.3	1364.8	1367.4
17.5°	1322.6	1326.5	1332.8	1345.6	1348.2
20°	1293.2	1298.3	1306.0	1322.6	1326.5
22.5°	1261.2	1266.3	1279.1	1294.5	1300.9
25°	1224.1	1234.4	1247.1	1267.6	1271.4
27.5°	1187.0	1196.0	1212.6	1234.4	1239.5
30°	1143.5	1157.6	1178.1	1199.8	1204.9
32.5°	1101.3	1115.4	1139.7	1162.7	1169.1
35°	1057.8	1070.6	1096.2	1123.1	1130.7
37.5°	1007.9	1024.6	1052.7	1079.6	1087.3
40°	955.5	976.0	1007.9	1036.1	1045.0
42.5°	905.6	927.4	959.3	990.0	1000.3
45°	853.2	873.6	912.0	946.6	954.2
47.5°	799.5	822.5	863.4	897.9	910.7
50°	745.7	770.0	813.5	849.3	857.0
52.5°	692.0	717.6	763.6	802.0	805.8
55°	635.7	663.9	712.5	749.6	757.2
57.5°	584.6	608.9	661.3	699.7	708.6
60°	528.3	555.1	611.4	647.2	658.7
62.5°	474.6	502.7	561.5	597.4	607.6
65°	418.3	450.3	507.8	550.0	560.3
67.5°	369.7	400.4	461.8	502.7	512.9
70°	313.4	347.9	413.2	455.4	465.6
72.5°	264.8	300.6	365.8	406.8	422.1
75°	212.3	253.3	318.5	362.0	372.2
77.5°	161.2	208.5	275.0	308.3	308.3
80°	115.1	165.0	226.4	241.8	244.3
82.5°	75.5	124.1	167.6	166.3	166.3
85°	43.5	80.6	99.8	97.2	97.2
87.5°	16.6	33.3	35.8	35.8	34.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)