

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: P311406

Luminaire Tested: **24FCZ2-40-UNV-L82765-S-CA125-W2A-U-5700K**

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: P311406
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-L82765-S-CA125-W2A-U-5700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" ACRYLIC SHEET
Light Source: (168) 5700K 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: 4040.0 lumens
Efficiency: N/A
Efficacy: 120.2 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

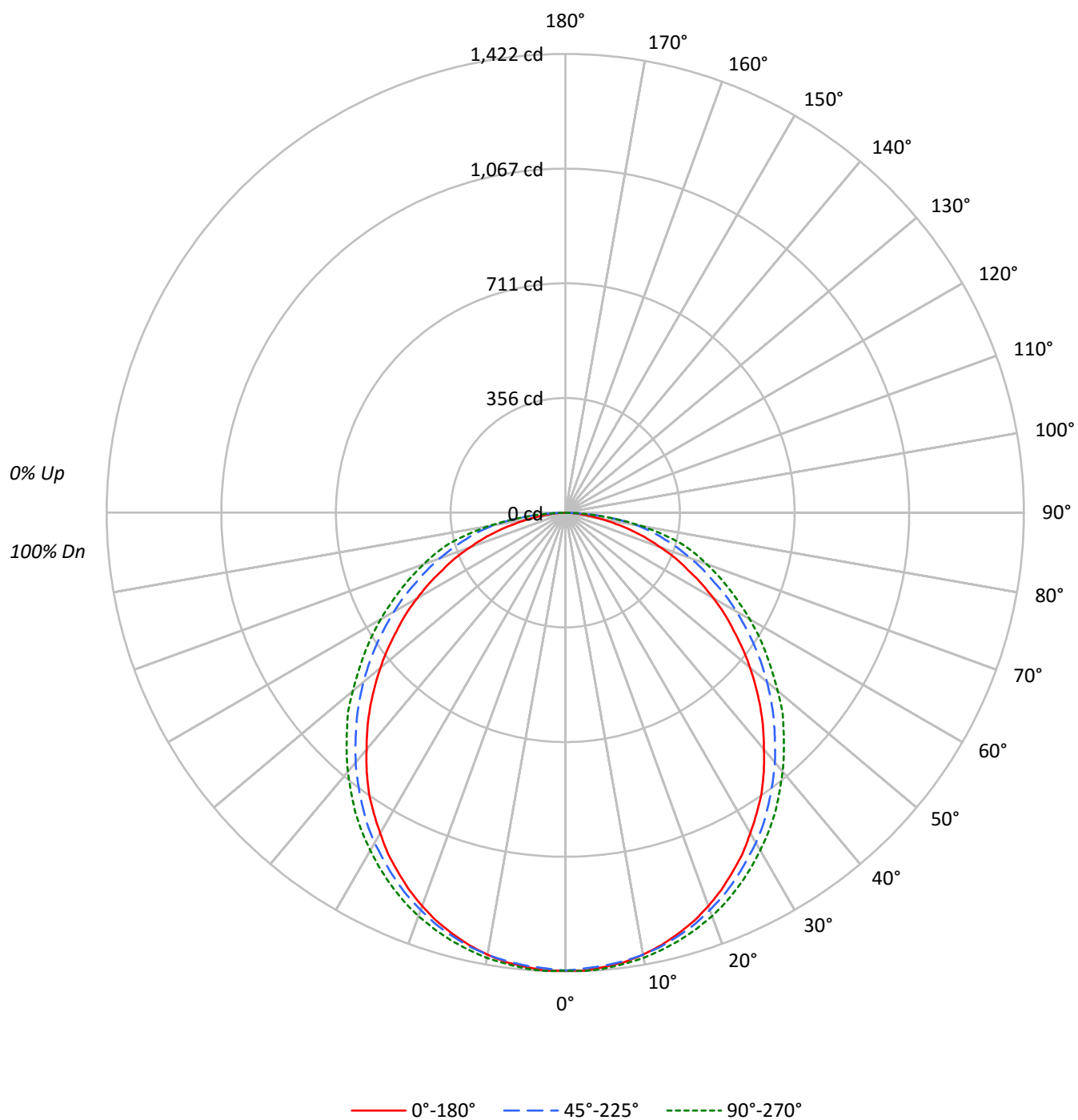
Input Watts (W): 33.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				0
RW	70	50	30	10	70	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		100
1	108	103	99	95	106	101	97	93	97	93	90		93	90	88		83
2	98	90	83	77	96	88	81	76	84	79	74		81	76	72		69
3	89	79	70	64	87	77	69	63	74	67	62		71	66	61		58
4	82	70	61	54	80	68	60	54	66	59	53		63	57	52		49
5	75	62	53	46	73	61	53	46	59	51	46		57	50	45		42
6	70	56	47	40	68	55	47	40	53	46	40		52	45	40		37
7	64	51	42	36	63	50	42	36	48	41	35		47	40	35		33
8	60	46	38	32	58	46	37	32	44	37	32		43	36	31		29
9	56	43	34	29	55	42	34	29	41	34	28		40	33	28		26
10	53	39	31	26	51	39	31	26	38	31	26		37	30	26		24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1910	1910	1910
5°	1908	1903	1915
10°	1900	1900	1915
15°	1882	1891	1911
20°	1858	1876	1905
25°	1823	1858	1894
30°	1782	1836	1878
35°	1743	1806	1863
40°	1684	1776	1841
45°	1629	1741	1822
50°	1566	1708	1800
55°	1496	1677	1782
60°	1426	1651	1778
65°	1336	1622	1790
70°	1237	1631	1838
75°	1107	1661	1941
80°	895	1760	1899
85°	673	1545	1505



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	134.4	3.3
10°-20°	383.9	9.5
20°-30°	577.1	14.3
30°-40°	687.5	17.0
40°-50°	703.6	17.4
50°-60°	633.4	15.7
60°-70°	497.4	12.3
70°-80°	322.9	8.0
80°-90°	99.8	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°	1095.4	27.1
0°-40°	1782.9	44.1
0°-60°	3119.8	77.2
0°-90°	4040.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4040.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1419	1419	1419	1419	1419	
5°	1413	1415	1409	1417	1418	134
15°	1351	1355	1358	1369	1372	381
25°	1228	1238	1251	1272	1276	566
35°	1061	1074	1100	1127	1134	662
45°	856	876	915	950	957	660
55°	638	666	715	752	760	572
65°	420	452	510	552	562	418
75°	213	254	320	363	373	225
85°	44	81	100	98	98	53
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1419.3	1419.3	1419.3	1419.3	1419.3
2.5°	1420.6	1420.6	1414.1	1420.6	1421.8
5°	1412.9	1415.4	1409.0	1416.7	1418.0
7.5°	1405.2	1405.2	1401.3	1409.0	1410.3
10°	1391.0	1392.3	1391.0	1400.0	1401.3
12.5°	1373.1	1375.6	1376.9	1385.9	1387.2
15°	1351.3	1355.1	1357.7	1369.2	1371.8
17.5°	1326.9	1330.7	1337.2	1350.0	1352.5
20°	1297.4	1302.5	1310.2	1326.9	1330.7
22.5°	1265.3	1270.4	1283.3	1298.7	1305.1
25°	1228.1	1238.3	1251.2	1271.7	1275.6
27.5°	1190.9	1199.8	1216.5	1238.3	1243.5
30°	1147.2	1161.3	1181.9	1203.7	1208.8
32.5°	1104.9	1119.0	1143.4	1166.5	1172.9
35°	1061.3	1074.1	1099.7	1126.7	1134.4
37.5°	1011.2	1027.9	1056.1	1083.1	1090.8
40°	958.6	979.1	1011.2	1039.4	1048.4
42.5°	908.5	930.4	962.4	993.2	1003.5
45°	855.9	876.5	915.0	949.6	957.3
47.5°	802.0	825.1	866.2	900.8	913.7
50°	748.1	772.5	816.1	852.1	859.8
52.5°	694.2	719.9	766.1	804.6	808.4
55°	637.8	666.0	714.8	752.0	759.7
57.5°	586.4	610.8	663.4	701.9	710.9
60°	530.0	556.9	613.4	649.3	660.9
62.5°	476.1	504.3	563.3	599.3	609.5
65°	419.6	451.7	509.5	551.8	562.1
67.5°	370.9	401.7	463.3	504.3	514.6
70°	314.4	349.0	414.5	456.8	467.1
72.5°	265.6	301.6	367.0	408.1	423.5
75°	213.0	254.1	319.5	363.2	373.4
77.5°	161.7	209.2	275.9	309.3	309.3
80°	115.5	165.5	227.1	242.5	245.1
82.5°	75.7	124.5	168.1	166.8	166.8
85°	43.6	80.8	100.1	97.5	97.5
87.5°	16.7	33.4	35.9	35.9	34.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)