

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: P311370

Luminaire Tested: **24FCZ2-40HE-UNV-L82765-S-CP125-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: P311370
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: 24FCZ2-40HE-UNV-L82765-S-CP125-W2A-U-5700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB SHEET
Light Source: (336) 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: 3985.0 lumens
Efficiency: N/A
Efficacy: 127.3 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

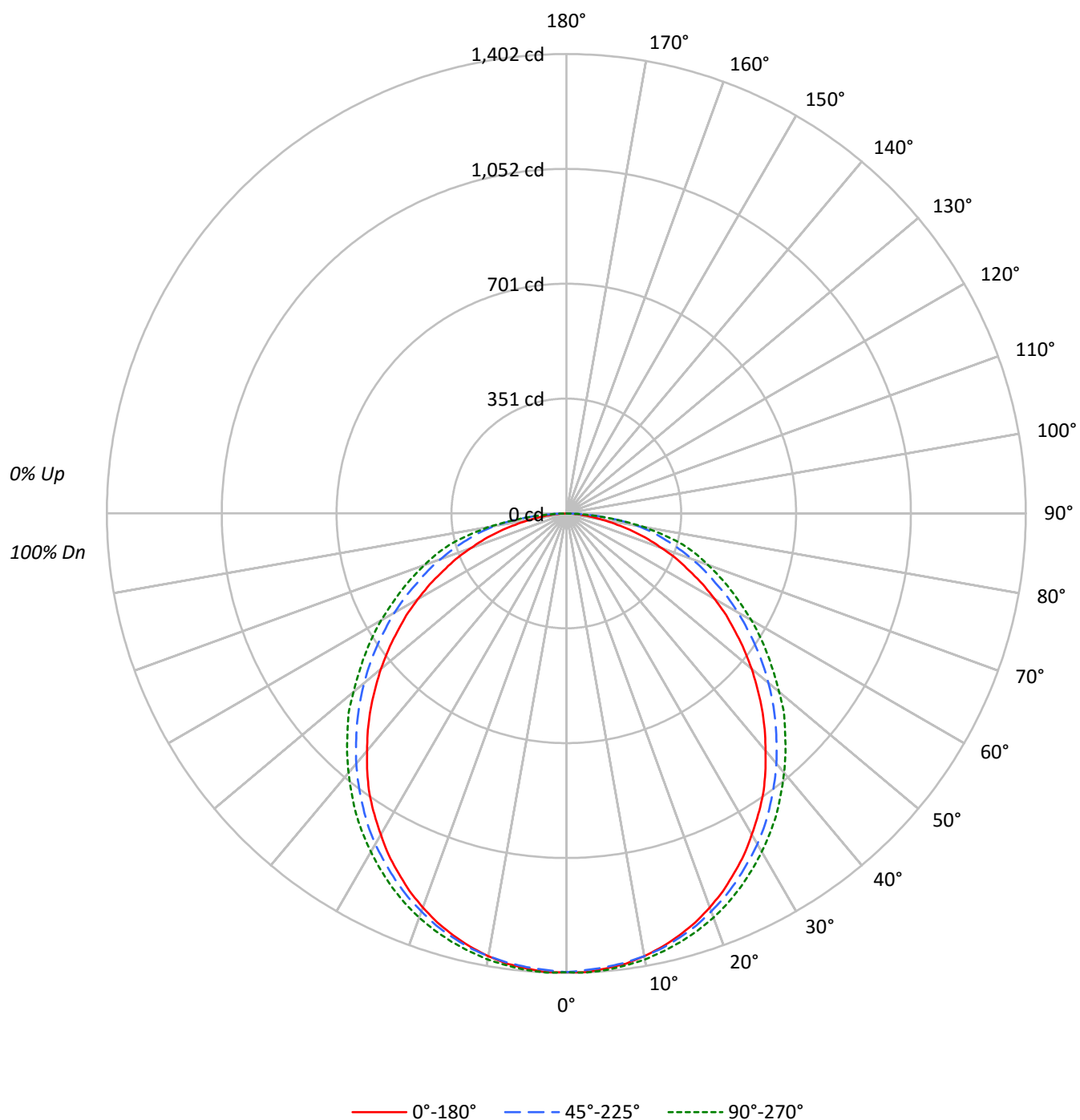
Input Watts (W): 31.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1884	1884	1884
5°	1882	1877	1889
10°	1875	1875	1888
15°	1857	1865	1885
20°	1832	1851	1879
25°	1798	1832	1868
30°	1758	1811	1853
35°	1719	1782	1838
40°	1661	1752	1816
45°	1607	1717	1797
50°	1545	1685	1775
55°	1476	1654	1758
60°	1407	1628	1754
65°	1318	1600	1765
70°	1220	1608	1812
75°	1092	1639	1915
80°	883	1736	1874
85°	664	1524	1485



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	132.5	3.3
10°-20°	378.7	9.5
20°-30°	569.3	14.3
30°-40°	678.1	17.0
40°-50°	694.0	17.4
50°-60°	624.8	15.7
60°-70°	490.7	12.3
70°-80°	318.4	8.0
80°-90°	98.5	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°	1080.5	27.1
0°-40°	1758.6	44.1
0°-60°	3077.4	77.2
0°-90°	3985.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3985.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1400	1400	1400	1400	1400	
5°	1394	1396	1390	1397	1399	132
15°	1333	1337	1339	1351	1353	376
25°	1211	1222	1234	1254	1258	558
35°	1047	1060	1085	1111	1119	653
45°	844	864	902	937	944	651
55°	629	657	705	742	749	564
65°	414	446	502	544	554	412
75°	210	251	315	358	368	222
85°	43	80	99	96	96	52
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1400.0	1400.0	1400.0	1400.0	1400.0
2.5°	1401.2	1401.2	1394.9	1401.2	1402.5
5°	1393.6	1396.2	1389.8	1397.4	1398.7
7.5°	1386.0	1386.0	1382.2	1389.8	1391.1
10°	1372.1	1373.4	1372.1	1381.0	1382.2
12.5°	1354.4	1356.9	1358.2	1367.0	1368.3
15°	1332.9	1336.7	1339.2	1350.6	1353.1
17.5°	1308.8	1312.6	1318.9	1331.6	1334.1
20°	1279.7	1284.8	1292.4	1308.8	1312.6
22.5°	1248.1	1253.1	1265.8	1281.0	1287.3
25°	1211.4	1221.5	1234.1	1254.4	1258.2
27.5°	1174.6	1183.5	1200.0	1221.5	1226.5
30°	1131.6	1145.5	1165.8	1187.3	1192.4
32.5°	1089.8	1103.8	1127.8	1150.6	1156.9
35°	1046.8	1059.5	1084.8	1111.4	1119.0
37.5°	997.4	1013.9	1041.7	1068.3	1075.9
40°	945.5	965.8	997.4	1025.3	1034.1
42.5°	896.2	917.7	949.3	979.7	989.8
45°	844.3	864.5	902.5	936.7	944.3
47.5°	791.1	813.9	854.4	888.6	901.2
50°	738.0	762.0	805.0	840.5	848.1
52.5°	684.8	710.1	755.7	793.6	797.4
55°	629.1	656.9	705.0	741.7	749.3
57.5°	578.5	602.5	654.4	692.4	701.2
60°	522.8	549.4	605.0	640.5	651.9
62.5°	469.6	497.5	555.7	591.1	601.2
65°	413.9	445.6	502.5	544.3	554.4
67.5°	365.8	396.2	456.9	497.5	507.6
70°	310.1	344.3	408.8	450.6	460.7
72.5°	262.0	297.5	362.0	402.5	417.7
75°	210.1	250.6	315.2	358.2	368.3
77.5°	159.5	206.3	272.1	305.1	305.1
80°	113.9	163.3	224.0	239.2	241.8
82.5°	74.7	122.8	165.8	164.6	164.6
85°	43.0	79.7	98.7	96.2	96.2
87.5°	16.5	32.9	35.4	35.4	34.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)