

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: P311361

Luminaire Tested: **24FCZ2-40HE-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: P311361
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-CA125-W2A-U-5700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" ACRYLIC 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: 4064.0 lumens
Efficiency: N/A
Efficacy: 129.8 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.27 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

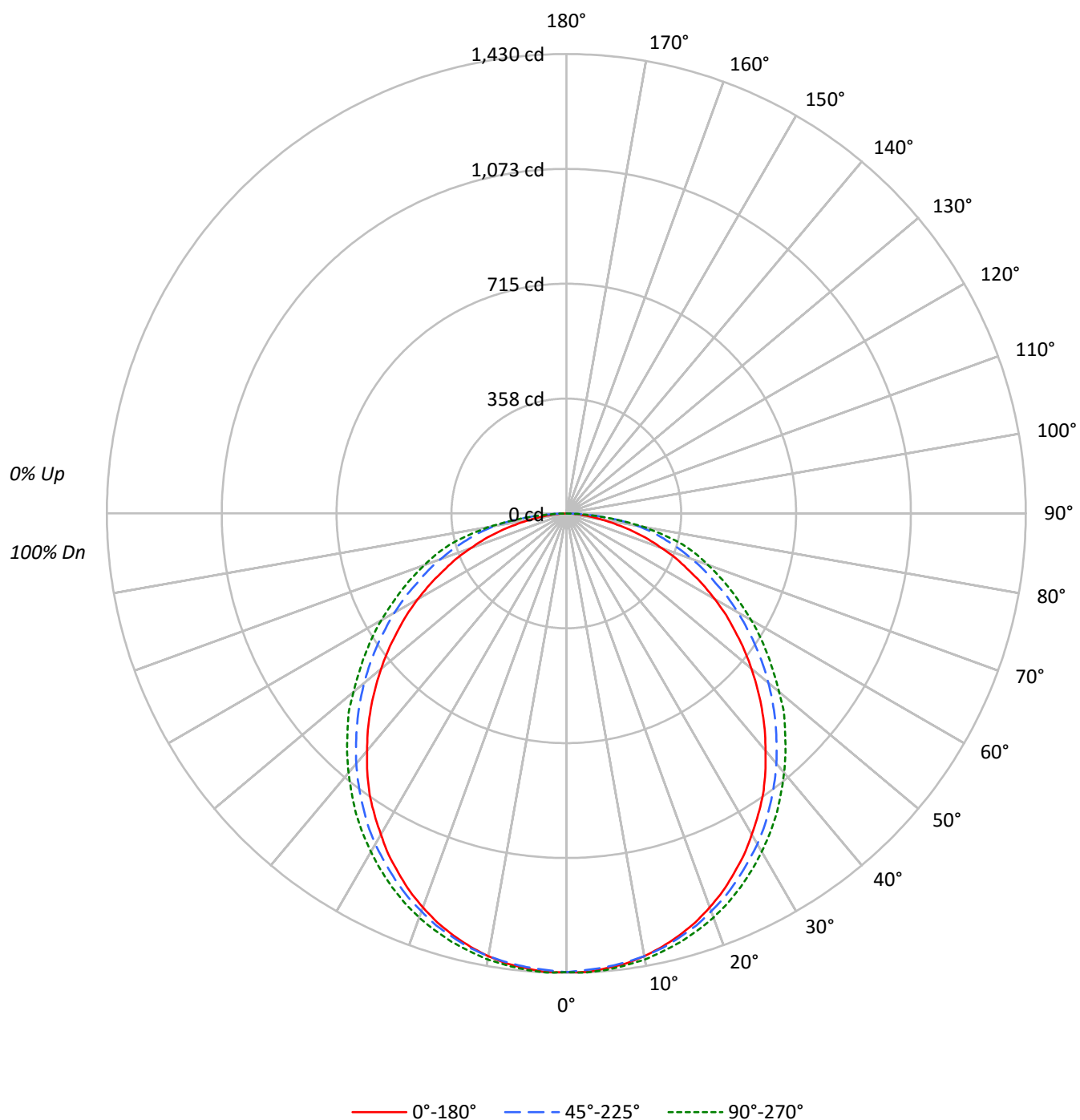
Input Watts (W): 31.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P311361

CATALOG NUMBER: 24FCZ2-40HE-UNV-L82765-S-CA125-W2A-U-5700K

Luminous Intensity Polar Plot





TEST NUMBER: P311361

CATALOG NUMBER: 24FCZ2-40HE-UNV-L82765-S-CA125-W2A-U-5700K

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°	1921	1921	1921
5°	1920	1914	1927
10°	1912	1912	1926
15°	1893	1902	1922
20°	1869	1887	1917
25°	1834	1868	1905
30°	1793	1847	1889
35°	1754	1817	1874
40°	1694	1787	1852
45°	1638	1751	1832
50°	1575	1719	1810
55°	1505	1687	1793
60°	1435	1660	1789
65°	1344	1632	1800
70°	1244	1640	1849
75°	1114	1671	1953
80°	900	1771	1911
85°	678	1555	1514



TEST NUMBER: P311361

CATALOG NUMBER: 24FCZ2-40HE-UNV-L82765-S-CA125-W2A-U-5700K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	135.2	3.3
10°-20°	386.2	9.5
20°-30°	580.6	14.3
30°-40°	691.5	17.0
40°-50°	707.7	17.4
50°-60°	637.2	15.7
60°-70°	500.4	12.3
70°-80°	324.8	8.0
80°-90°	100.4	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°	1101.9	27.1
0°-40°	1793.5	44.1
0°-60°	3138.4	77.2
0°-90°	4064.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4064.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1428	1428	1428	1428	1428	
5°	1421	1424	1417	1425	1426	135
15°	1359	1363	1366	1377	1380	383
25°	1235	1246	1259	1279	1283	569
35°	1068	1080	1106	1133	1141	666
45°	861	882	920	955	963	664
55°	642	670	719	756	764	575
65°	422	454	512	555	565	420
75°	214	256	321	365	376	227
85°	44	81	101	98	98	53
90°	0	0	0	0	0	



TEST NUMBER: P311361

CATALOG NUMBER: 24FCZ2-40HE-UNV-L82765-S-CA125-W2A-U-5700K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1427.7	1427.7	1427.7	1427.7	1427.7
2.5°	1429.0	1429.0	1422.5	1429.0	1430.3
5°	1421.3	1423.8	1417.4	1425.1	1426.4
7.5°	1413.5	1413.5	1409.6	1417.4	1418.7
10°	1399.3	1400.6	1399.3	1408.3	1409.6
12.5°	1381.2	1383.8	1385.1	1394.1	1395.4
15°	1359.3	1363.2	1365.7	1377.4	1379.9
17.5°	1334.8	1338.6	1345.1	1358.0	1360.6
20°	1305.1	1310.2	1318.0	1334.8	1338.6
22.5°	1272.8	1278.0	1290.9	1306.4	1312.8
25°	1235.4	1245.7	1258.6	1279.3	1283.1
27.5°	1197.9	1207.0	1223.8	1245.7	1250.9
30°	1154.0	1168.2	1188.9	1210.8	1216.0
32.5°	1111.4	1125.6	1150.2	1173.4	1179.9
35°	1067.6	1080.5	1106.3	1133.4	1141.1
37.5°	1017.2	1034.0	1062.4	1089.5	1097.2
40°	964.3	984.9	1017.2	1045.6	1054.6
42.5°	913.9	935.9	968.2	999.1	1009.5
45°	861.0	881.7	920.4	955.2	963.0
47.5°	806.8	830.0	871.3	906.2	919.1
50°	752.6	777.1	821.0	857.1	864.9
52.5°	698.4	724.2	770.7	809.4	813.3
55°	641.6	670.0	719.0	756.5	764.2
57.5°	589.9	614.5	667.4	706.1	715.1
60°	533.1	560.2	617.0	653.2	664.8
62.5°	478.9	507.3	566.7	602.8	613.2
65°	422.1	454.4	512.5	555.1	565.4
67.5°	373.1	404.0	466.0	507.3	517.6
70°	316.3	351.1	417.0	459.6	469.9
72.5°	267.2	303.4	369.2	410.5	426.0
75°	214.3	255.6	321.4	365.3	375.6
77.5°	162.7	210.4	277.5	311.1	311.1
80°	116.2	166.5	228.5	244.0	246.6
82.5°	76.2	125.2	169.1	167.8	167.8
85°	43.9	81.3	100.7	98.1	98.1
87.5°	16.8	33.6	36.1	36.1	34.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)