

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: P311354

Luminaire Tested: **24FCZ2-40HE-UNV-L82765-S-CA125-W2A-U-2700K**

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: P311354
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-2700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" ACRYLIC SHEET
Light Source: (336) 2700K 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: 3577.0 lumens
Efficiency: N/A
Efficacy: 117.7 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

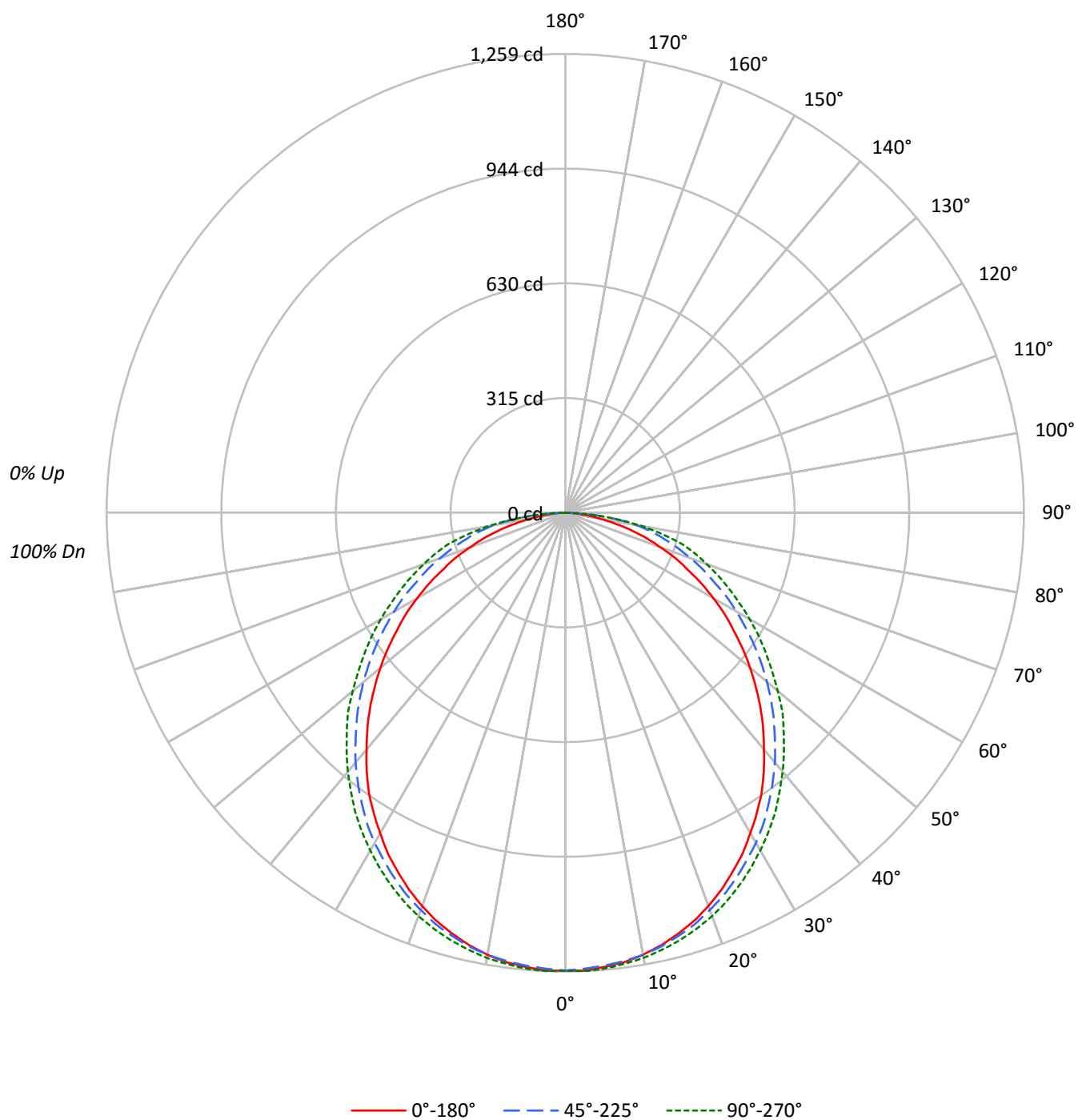
Input Watts (W): 30.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P311354

CATALOG NUMBER: 24FCZ2-40HE-UNV-L82765-S-CA125-W2A-U-2700K

Luminous Intensity Polar Plot





TEST NUMBER: P311354

CATALOG NUMBER: 24FCZ2-40HE-UNV-L82765-S-CA125-W2A-U-2700K

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°	1691	1691	1691
5°	1690	1685	1696
10°	1683	1683	1695
15°	1667	1674	1692
20°	1645	1661	1687
25°	1614	1645	1677
30°	1578	1626	1663
35°	1543	1599	1650
40°	1491	1573	1630
45°	1442	1541	1613
50°	1387	1513	1593
55°	1325	1485	1578
60°	1263	1461	1574
65°	1183	1436	1585
70°	1095	1444	1627
75°	980	1471	1719
80°	793	1558	1681
85°	596	1368	1334



TEST NUMBER: P311354

CATALOG NUMBER: 24FCZ2-40HE-UNV-L82765-S-CA125-W2A-U-2700K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	119.0	3.3
10°-20°	339.9	9.5
20°-30°	511.0	14.3
30°-40°	608.7	17.0
40°-50°	622.9	17.4
50°-60°	560.8	15.7
60°-70°	440.4	12.3
70°-80°	285.8	8.0
80°-90°	88.4	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°	969.9	27.1
0°-40°	1578.5	44.1
0°-60°	2762.3	77.2
0°-90°	3577.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3577.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1257	1257	1257	1257	1257	
5°	1251	1253	1248	1254	1256	119
15°	1196	1200	1202	1212	1215	337
25°	1087	1096	1108	1126	1129	501
35°	940	951	974	998	1004	586
45°	758	776	810	841	848	584
55°	565	590	633	666	673	506
65°	372	400	451	489	498	370
75°	189	225	283	322	331	200
85°	39	72	89	86	86	47
90°	0	0	0	0	0	



TEST NUMBER: P311354

CATALOG NUMBER: 24FCZ2-40HE-UNV-L82765-S-CA125-W2A-U-2700K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1256.6	1256.6	1256.6	1256.6	1256.6
2.5°	1257.8	1257.8	1252.1	1257.8	1258.9
5°	1250.9	1253.2	1247.5	1254.4	1255.5
7.5°	1244.1	1244.1	1240.7	1247.5	1248.7
10°	1231.6	1232.8	1231.6	1239.6	1240.7
12.5°	1215.7	1218.0	1219.1	1227.1	1228.2
15°	1196.4	1199.8	1202.1	1212.3	1214.6
17.5°	1174.8	1178.2	1183.9	1195.3	1197.5
20°	1148.7	1153.2	1160.0	1174.8	1178.2
22.5°	1120.3	1124.8	1136.2	1149.8	1155.5
25°	1087.3	1096.4	1107.8	1126.0	1129.4
27.5°	1054.4	1062.3	1077.1	1096.4	1101.0
30°	1015.8	1028.2	1046.4	1065.7	1070.3
32.5°	978.3	990.8	1012.3	1032.8	1038.5
35°	939.6	951.0	973.7	997.6	1004.4
37.5°	895.3	910.1	935.1	958.9	965.8
40°	848.7	866.9	895.3	920.3	928.3
42.5°	804.4	823.7	852.1	879.4	888.5
45°	757.8	776.0	810.1	840.8	847.6
47.5°	710.1	730.6	766.9	797.6	809.0
50°	662.4	684.0	722.6	754.4	761.2
52.5°	614.7	637.4	678.3	712.4	715.8
55°	564.7	589.7	632.9	665.8	672.6
57.5°	519.2	540.8	587.4	621.5	629.4
60°	469.2	493.1	543.1	574.9	585.1
62.5°	421.5	446.5	498.8	530.6	539.7
65°	371.5	399.9	451.1	488.6	497.7
67.5°	328.4	355.6	410.2	446.5	455.6
70°	278.4	309.0	367.0	404.5	413.6
72.5°	235.2	267.0	324.9	361.3	374.9
75°	188.6	225.0	282.9	321.5	330.6
77.5°	143.2	185.2	244.3	273.8	273.8
80°	102.3	146.6	201.1	214.7	217.0
82.5°	67.0	110.2	148.8	147.7	147.7
85°	38.6	71.6	88.6	86.4	86.4
87.5°	14.8	29.5	31.8	31.8	30.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)