

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: P311505

Luminaire Tested: **24FCZ2-45-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: P311505
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: 24FCZ2-45-UNV-L82765-S-CP125-W2A-U-5700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB 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: 4435.0 lumens
Efficiency: N/A
Efficacy: 114.6 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

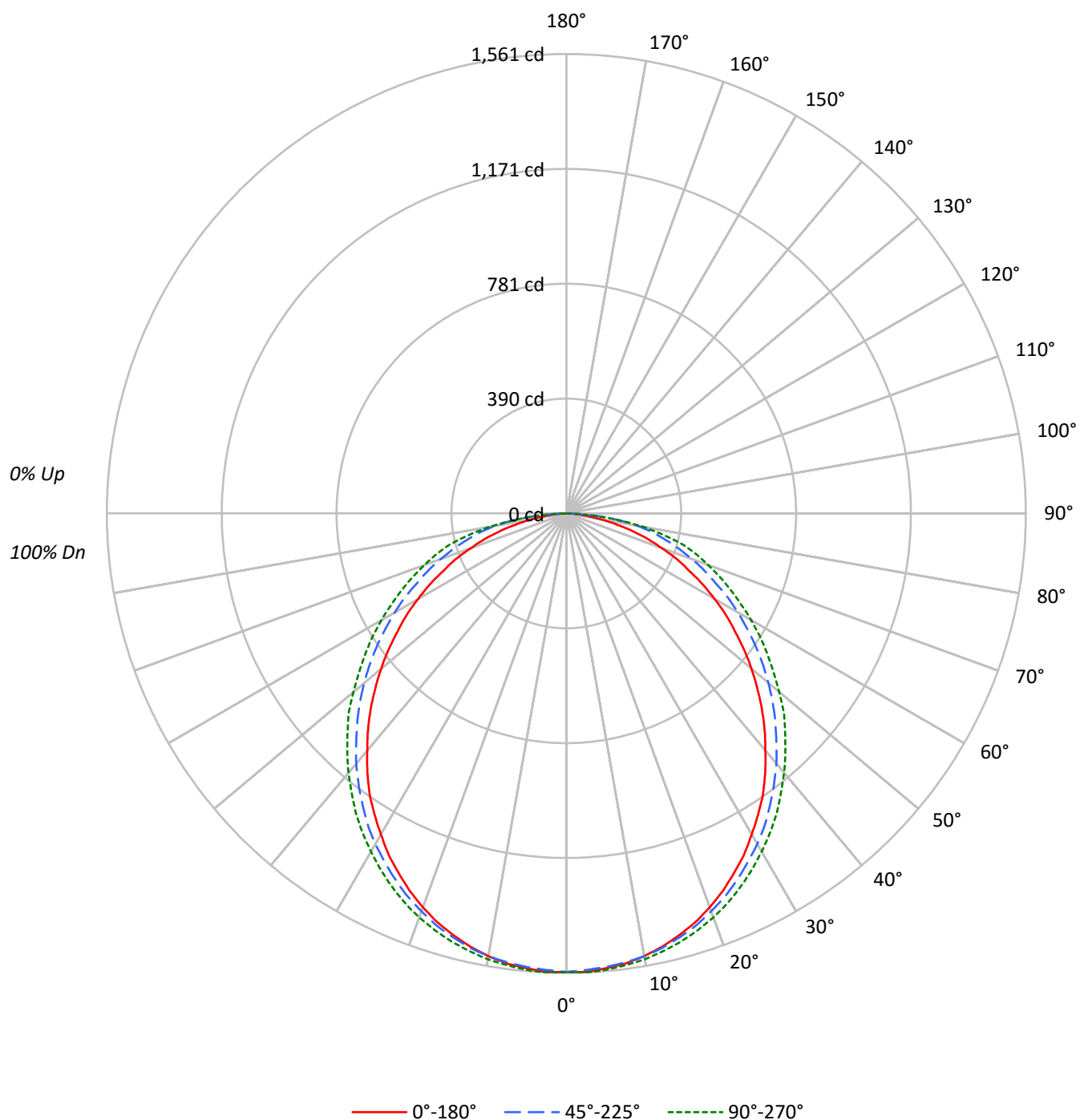
Input Watts (W): 38.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P311505

CATALOG NUMBER: 24FCZ2-45-UNV-L82765-S-CP125-W2A-U-5700K

Luminous Intensity Polar Plot





TEST NUMBER: P311505

CATALOG NUMBER: 24FCZ2-45-UNV-L82765-S-CP125-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°	2096	2096	2096
5°	2095	2089	2102
10°	2086	2086	2102
15°	2066	2076	2098
20°	2039	2059	2092
25°	2001	2039	2079
30°	1957	2016	2062
35°	1914	1983	2045
40°	1848	1950	2021
45°	1788	1911	2000
50°	1719	1875	1976
55°	1642	1841	1956
60°	1566	1812	1952
65°	1467	1781	1964
70°	1358	1790	2017
75°	1215	1824	2131
80°	982	1932	2085
85°	739	1697	1653



TEST NUMBER: P311505

CATALOG NUMBER: 24FCZ2-45-UNV-L82765-S-CP125-W2A-U-5700K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	147.5	3.3
10°-20°	421.5	9.5
20°-30°	633.6	14.3
30°-40°	754.7	17.0
40°-50°	772.4	17.4
50°-60°	695.4	15.7
60°-70°	546.1	12.3
70°-80°	354.4	8.0
80°-90°	109.6	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°	1202.5	27.1
0°-40°	1957.2	44.1
0°-60°	3424.9	77.2
0°-90°	4435.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4435.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1558	1558	1558	1558	1558	
5°	1551	1554	1547	1555	1557	147
15°	1483	1488	1490	1503	1506	418
25°	1348	1359	1374	1396	1400	621
35°	1165	1179	1207	1237	1245	727
45°	940	962	1004	1042	1051	724
55°	700	731	785	826	834	628
65°	461	496	559	606	617	459
75°	234	279	351	399	410	247
85°	48	89	110	107	107	58
90°	0	0	0	0	0	



TEST NUMBER: P311505

CATALOG NUMBER: 24FCZ2-45-UNV-L82765-S-CP125-W2A-U-5700K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1558.0	1558.0	1558.0	1558.0	1558.0
2.5°	1559.5	1559.5	1552.4	1559.5	1560.9
5°	1551.0	1553.8	1546.8	1555.2	1556.6
7.5°	1542.5	1542.5	1538.3	1546.8	1548.2
10°	1527.1	1528.5	1527.1	1536.9	1538.3
12.5°	1507.3	1510.1	1511.6	1521.4	1522.8
15°	1483.4	1487.6	1490.4	1503.1	1505.9
17.5°	1456.6	1460.8	1467.9	1482.0	1484.8
20°	1424.2	1429.9	1438.3	1456.6	1460.8
22.5°	1389.0	1394.6	1408.7	1425.6	1432.7
25°	1348.1	1359.4	1373.5	1396.0	1400.3
27.5°	1307.3	1317.2	1335.5	1359.4	1365.0
30°	1259.4	1274.9	1297.4	1321.4	1327.0
32.5°	1212.9	1228.4	1255.2	1280.5	1287.6
35°	1165.0	1179.1	1207.3	1236.9	1245.3
37.5°	1110.1	1128.4	1159.4	1189.0	1197.4
40°	1052.3	1074.9	1110.1	1141.1	1150.9
42.5°	997.4	1021.3	1056.5	1090.3	1101.6
45°	939.6	962.2	1004.4	1042.5	1050.9
47.5°	880.5	905.8	950.9	988.9	1003.0
50°	821.3	848.0	895.9	935.4	943.8
52.5°	762.1	790.3	841.0	883.3	887.5
55°	700.1	731.1	784.7	825.5	834.0
57.5°	643.8	670.6	728.3	770.6	780.4
60°	581.8	611.4	673.4	712.8	725.5
62.5°	522.6	553.6	618.4	657.9	669.1
65°	460.7	495.9	559.3	605.7	617.0
67.5°	407.1	440.9	508.5	553.6	564.9
70°	345.1	383.2	455.0	501.5	512.8
72.5°	291.6	331.0	402.9	448.0	464.9
75°	233.8	278.9	350.8	398.7	409.9
77.5°	177.5	229.6	302.9	339.5	339.5
80°	126.8	181.7	249.3	266.2	269.1
82.5°	83.1	136.6	184.5	183.1	183.1
85°	47.9	88.7	109.9	107.1	107.1
87.5°	18.3	36.6	39.4	39.4	38.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)