

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: P314351

Luminaire Tested: **24FCZ2-45-UNV-L83050-S-CP125-W2A-U-3500K**

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: P314351
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-L83050-S-CP125-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB SHEET
Light Source: (168) 3500K 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: 4254.0 lumens
Efficiency: N/A
Efficacy: 113.1 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

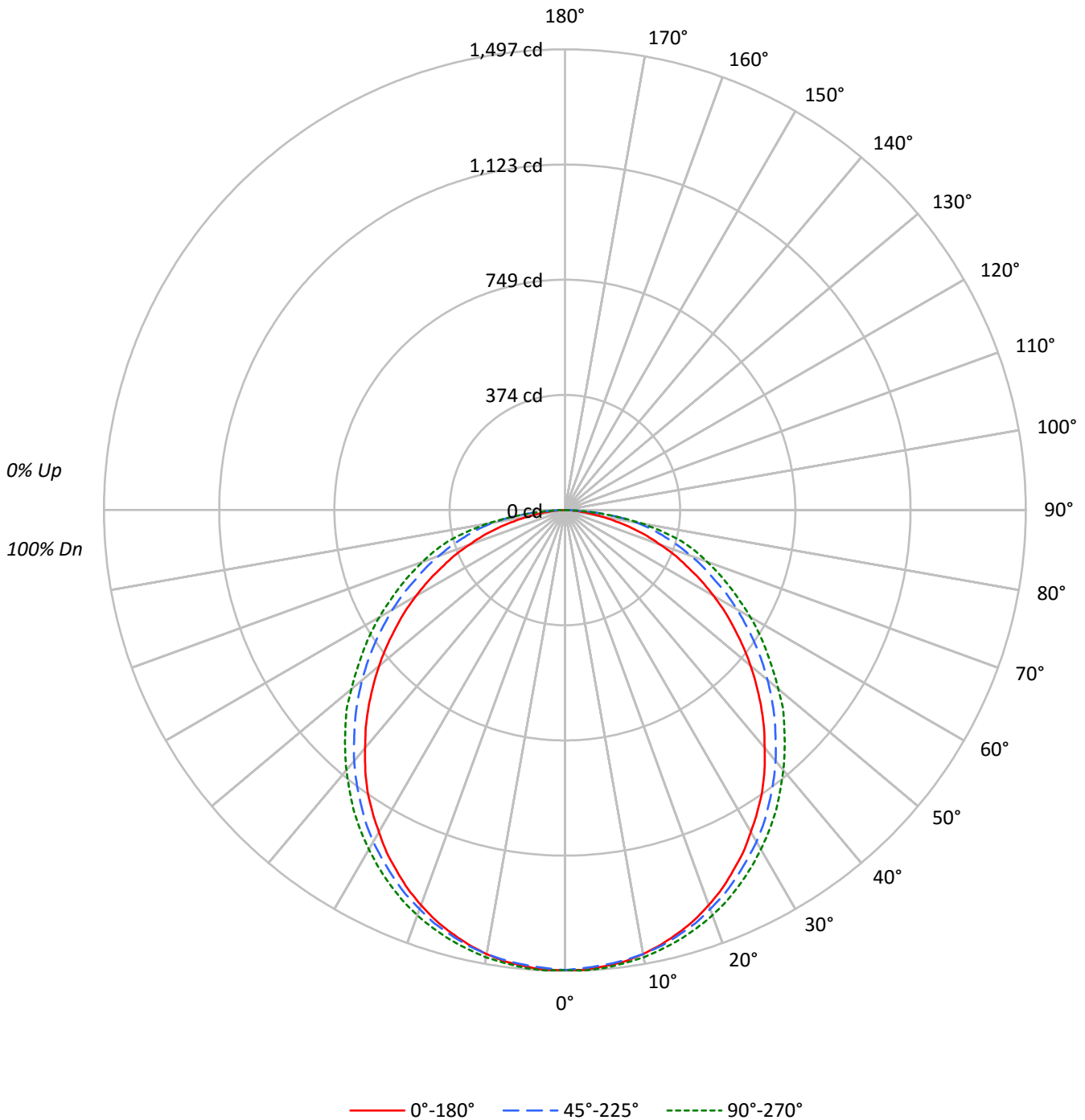
Input Watts (W): 37.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P314351

CATALOG NUMBER: 24FCZ2-45-UNV-L83050-S-CP125-W2A-U-3500K

Luminous Intensity Polar Plot





TEST NUMBER: P314351

CATALOG NUMBER: 24FCZ2-45-UNV-L83050-S-CP125-W2A-U-3500K

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	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	102	102	102	100
1	108	103	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2011	2011	2011
5°	2009	2004	2017
10°	2001	2001	2016
15°	1982	1991	2012
20°	1956	1975	2006
25°	1920	1956	1994
30°	1877	1934	1978
35°	1836	1902	1962
40°	1773	1870	1939
45°	1715	1833	1918
50°	1649	1799	1895
55°	1575	1765	1876
60°	1502	1738	1873
65°	1407	1708	1884
70°	1303	1717	1935
75°	1166	1749	2044
80°	942	1853	2000
85°	709	1627	1585



TEST NUMBER: P314351

CATALOG NUMBER: 24FCZ2-45-UNV-L83050-S-CP125-W2A-U-3500K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	141.5	3.3
10°-20°	404.3	9.5
20°-30°	607.7	14.3
30°-40°	723.9	17.0
40°-50°	740.8	17.4
50°-60°	667.0	15.7
60°-70°	523.8	12.3
70°-80°	339.9	8.0
80°-90°	105.1	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°	1153.4	27.1
0°-40°	1877.3	44.1
0°-60°	3285.1	77.2
0°-90°	4254.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4254.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1494	1494	1494	1494	1494	
5°	1488	1490	1484	1492	1493	141
15°	1423	1427	1430	1442	1444	401
25°	1293	1304	1317	1339	1343	596
35°	1118	1131	1158	1186	1194	697
45°	901	923	963	1000	1008	695
55°	672	701	753	792	800	602
65°	442	476	536	581	592	440
75°	224	268	336	382	393	237
85°	46	85	105	103	103	55
90°	0	0	0	0	0	



TEST NUMBER: P314351

CATALOG NUMBER: 24FCZ2-45-UNV-L83050-S-CP125-W2A-U-3500K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1494.5	1494.5	1494.5	1494.5	1494.5
2.5°	1495.8	1495.8	1489.1	1495.8	1497.2
5°	1487.7	1490.4	1483.6	1491.8	1493.1
7.5°	1479.6	1479.6	1475.5	1483.6	1485.0
10°	1464.7	1466.1	1464.7	1474.2	1475.5
12.5°	1445.8	1448.5	1449.9	1459.3	1460.7
15°	1422.8	1426.9	1429.6	1441.8	1444.5
17.5°	1397.2	1401.2	1408.0	1421.5	1424.2
20°	1366.1	1371.5	1379.6	1397.2	1401.2
22.5°	1332.3	1337.7	1351.2	1367.4	1374.2
25°	1293.1	1303.9	1317.4	1339.1	1343.1
27.5°	1253.9	1263.4	1281.0	1303.9	1309.3
30°	1208.0	1222.9	1244.5	1267.5	1272.9
32.5°	1163.4	1178.3	1203.9	1228.3	1235.0
35°	1117.5	1131.0	1158.0	1186.4	1194.5
37.5°	1064.8	1082.3	1112.1	1140.4	1148.5
40°	1009.4	1031.0	1064.8	1094.5	1104.0
42.5°	956.7	979.6	1013.4	1045.9	1056.7
45°	901.3	922.9	963.4	999.9	1008.0
47.5°	844.5	868.8	912.1	948.6	962.1
50°	787.8	813.4	859.4	897.2	905.3
52.5°	731.0	758.0	806.7	847.2	851.3
55°	671.6	701.3	752.6	791.8	799.9
57.5°	617.5	643.2	698.6	739.1	748.6
60°	558.1	586.4	645.9	683.7	695.9
62.5°	501.3	531.0	593.2	631.0	641.8
65°	441.9	475.6	536.4	581.0	591.8
67.5°	390.5	422.9	487.8	531.0	541.8
70°	331.1	367.5	436.4	481.0	491.8
72.5°	279.7	317.5	386.5	429.7	445.9
75°	224.3	267.5	336.5	382.4	393.2
77.5°	170.3	220.3	290.5	325.6	325.6
80°	121.6	174.3	239.2	255.4	258.1
82.5°	79.7	131.1	177.0	175.7	175.7
85°	45.9	85.1	105.4	102.7	102.7
87.5°	17.6	35.1	37.8	37.8	36.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)