

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: P314326

Luminaire Tested: **24FCZ2-45HE-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: P314326
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: 24FCZ2-45HE-UNV-L83050-S-CP125-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB SHEET
Light Source: (336) 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: 4210.0 lumens
Efficiency: N/A
Efficacy: 124.6 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

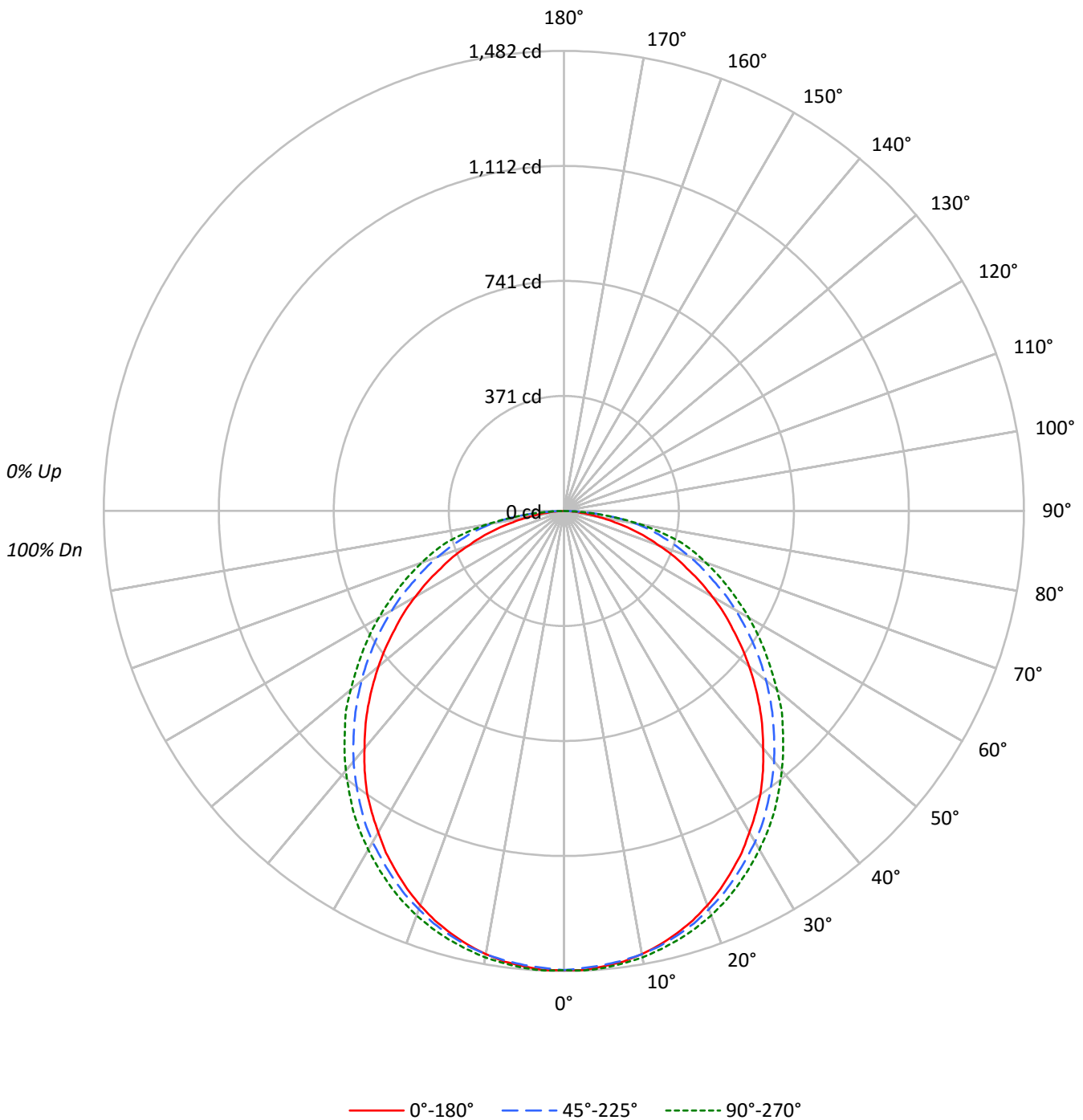
Input Watts (W): 33.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P314326

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

Luminous Intensity Polar Plot





TEST NUMBER: P314326

CATALOG NUMBER: 24FCZ2-45HE-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°	1990	1990	1990
5°	1989	1983	1996
10°	1981	1981	1995
15°	1961	1971	1991
20°	1936	1955	1986
25°	1900	1936	1973
30°	1857	1913	1957
35°	1816	1882	1942
40°	1754	1851	1919
45°	1697	1814	1898
50°	1632	1780	1876
55°	1559	1747	1857
60°	1486	1720	1853
65°	1392	1690	1865
70°	1289	1699	1915
75°	1154	1731	2023
80°	933	1834	1979
85°	702	1610	1568



TEST NUMBER: P314326

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

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	140.0	3.3
10°-20°	400.1	9.5
20°-30°	601.4	14.3
30°-40°	716.4	17.0
40°-50°	733.2	17.4
50°-60°	660.1	15.7
60°-70°	518.4	12.3
70°-80°	336.4	8.0
80°-90°	104.0	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°	1141.5	27.1
0°-40°	1857.9	44.1
0°-60°	3251.1	77.2
0°-90°	4210.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4210.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1479	1479	1479	1479	1479	
5°	1472	1475	1468	1476	1478	140
15°	1408	1412	1415	1427	1430	397
25°	1280	1290	1304	1325	1329	590
35°	1106	1119	1146	1174	1182	690
45°	892	913	954	990	998	688
55°	665	694	745	784	792	596
65°	437	471	531	575	586	435
75°	222	265	333	378	389	235
85°	46	84	104	102	102	55
90°	0	0	0	0	0	



TEST NUMBER: P314326

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

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1479.0	1479.0	1479.0	1479.0	1479.0
2.5°	1480.3	1480.3	1473.7	1480.3	1481.7
5°	1472.3	1475.0	1468.3	1476.3	1477.7
7.5°	1464.3	1464.3	1460.3	1468.3	1469.6
10°	1449.6	1450.9	1449.6	1458.9	1460.3
12.5°	1430.9	1433.5	1434.9	1444.2	1445.6
15°	1408.1	1412.1	1414.8	1426.8	1429.5
17.5°	1382.7	1386.7	1393.4	1406.8	1409.5
20°	1352.0	1357.3	1365.3	1382.7	1386.7
22.5°	1318.5	1323.9	1337.3	1353.3	1360.0
25°	1279.7	1290.4	1303.8	1325.2	1329.2
27.5°	1241.0	1250.3	1267.7	1290.4	1295.8
30°	1195.5	1210.2	1231.6	1254.3	1259.7
32.5°	1151.4	1166.1	1191.5	1215.6	1222.2
35°	1105.9	1119.3	1146.0	1174.1	1182.1
37.5°	1053.8	1071.1	1100.6	1128.6	1136.7
40°	998.9	1020.3	1053.8	1083.2	1092.5
42.5°	946.8	969.5	1002.9	1035.0	1045.7
45°	891.9	913.3	953.5	989.6	997.6
47.5°	835.8	859.9	902.6	938.8	952.1
50°	779.6	805.0	850.5	887.9	896.0
52.5°	723.5	750.2	798.3	838.5	842.5
55°	664.6	694.0	744.8	783.6	791.7
57.5°	611.1	636.5	691.4	731.5	740.8
60°	552.3	580.4	639.2	676.6	688.7
62.5°	496.1	525.5	587.1	624.5	635.2
65°	437.3	470.7	530.9	575.0	585.7
67.5°	386.5	418.6	482.7	525.5	536.2
70°	327.6	363.7	431.9	476.1	486.8
72.5°	276.8	314.3	382.5	425.2	441.3
75°	222.0	264.8	333.0	378.4	389.1
77.5°	168.5	218.0	287.5	322.3	322.3
80°	120.4	172.5	236.7	252.7	255.4
82.5°	78.9	129.7	175.2	173.8	173.8
85°	45.5	84.2	104.3	101.6	101.6
87.5°	17.4	34.8	37.4	37.4	36.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)