

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: P311450

Luminaire Tested: **24FCZ2-45HE-UNV-L82765-S-CA125-W2A-U-5500K**

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: P311450
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-L82765-S-CA125-W2A-U-5500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" ACRYLIC SHEET
Light Source: (336) 5500K 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

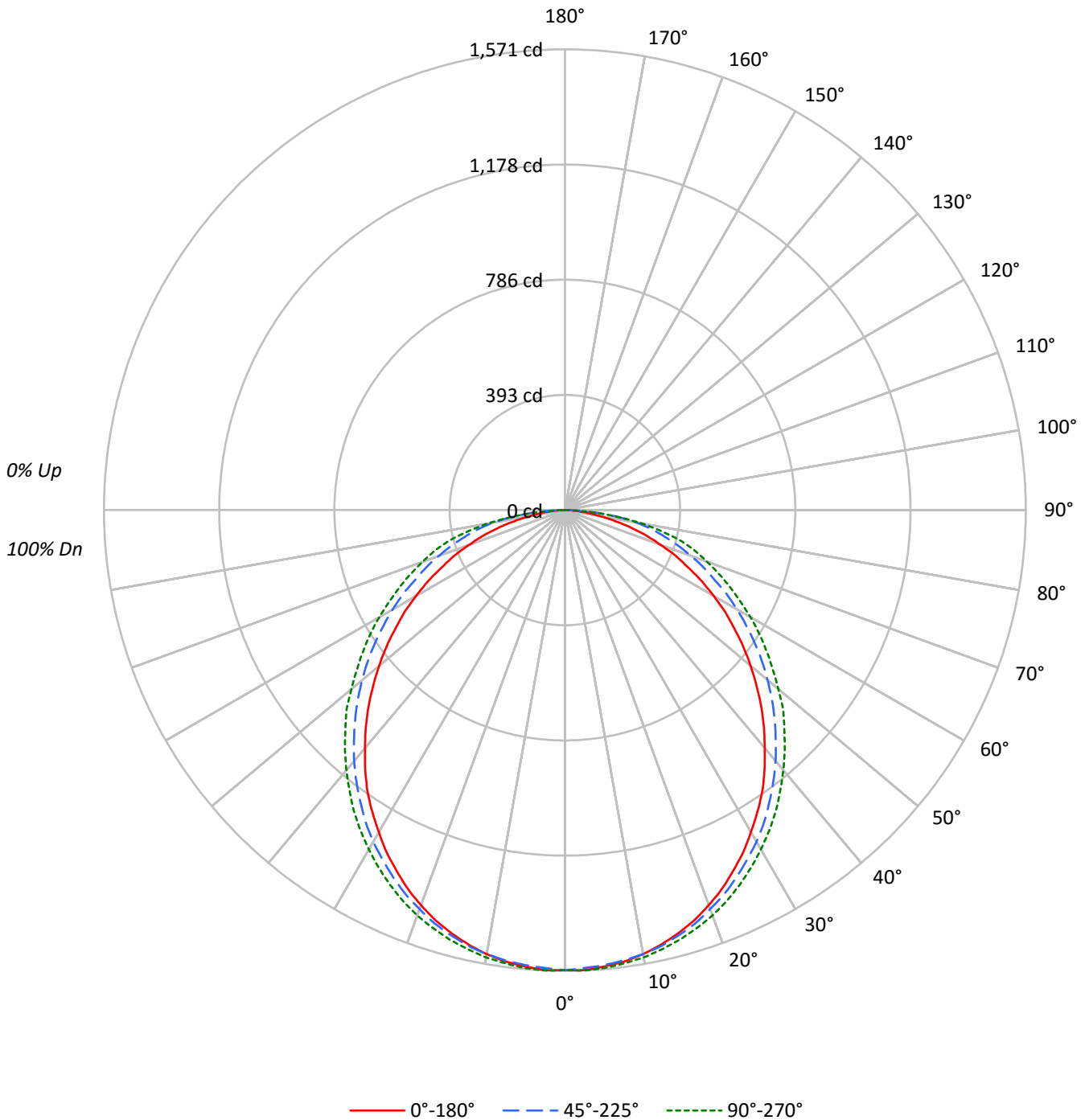
Lumens per Lamp: N/A
Luminaire Lumens: 4465.0 lumens
Efficiency: N/A
Efficacy: 128.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 34.7
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: P311450
CATALOG NUMBER: 24FCZ2-45HE-UNV-L82765-S-CA125-W2A-U-5500K

Luminous Intensity Polar Plot





TEST NUMBER: P311450

CATALOG NUMBER: 24FCZ2-45HE-UNV-L82765-S-CA125-W2A-U-5500K

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°	2111	2111	2111
5°	2109	2103	2117
10°	2100	2100	2116
15°	2080	2090	2112
20°	2053	2073	2106
25°	2015	2053	2093
30°	1970	2029	2076
35°	1927	1996	2059
40°	1861	1963	2035
45°	1800	1924	2013
50°	1731	1888	1989
55°	1654	1853	1970
60°	1576	1824	1965
65°	1477	1792	1978
70°	1367	1802	2031
75°	1224	1836	2145
80°	989	1945	2099
85°	744	1707	1664



TEST NUMBER: P311450

CATALOG NUMBER: 24FCZ2-45HE-UNV-L82765-S-CA125-W2A-U-5500K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	148.5	3.3
10°-20°	424.3	9.5
20°-30°	637.8	14.3
30°-40°	759.8	17.0
40°-50°	777.6	17.4
50°-60°	700.1	15.7
60°-70°	549.8	12.3
70°-80°	356.8	8.0
80°-90°	110.4	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°	1210.7	27.1
0°-40°	1970.4	44.1
0°-60°	3448.1	77.2
0°-90°	4465.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4465.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1569	1569	1569	1569	1569	
5°	1562	1564	1557	1566	1567	148
15°	1493	1498	1500	1513	1516	421
25°	1357	1369	1383	1406	1410	625
35°	1173	1187	1215	1245	1254	732
45°	946	969	1011	1050	1058	729
55°	705	736	790	831	840	632
65°	464	499	563	610	621	462
75°	235	281	353	401	413	249
85°	48	89	111	108	108	58
90°	0	0	0	0	0	



TEST NUMBER: P311450

CATALOG NUMBER: 24FCZ2-45HE-UNV-L82765-S-CA125-W2A-U-5500K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1568.6	1568.6	1568.6	1568.6	1568.6
2.5°	1570.0	1570.0	1562.9	1570.0	1571.4
5°	1561.5	1564.3	1557.2	1565.7	1567.2
7.5°	1553.0	1553.0	1548.7	1557.2	1558.7
10°	1537.4	1538.8	1537.4	1547.3	1548.7
12.5°	1517.5	1520.4	1521.8	1531.7	1533.1
15°	1493.4	1497.7	1500.5	1513.3	1516.1
17.5°	1466.5	1470.7	1477.8	1492.0	1494.8
20°	1433.8	1439.5	1448.0	1466.5	1470.7
22.5°	1398.4	1404.1	1418.2	1435.3	1442.4
25°	1357.3	1368.6	1382.8	1405.5	1409.7
27.5°	1316.1	1326.1	1344.5	1368.6	1374.3
30°	1267.9	1283.5	1306.2	1330.3	1336.0
32.5°	1221.1	1236.7	1263.7	1289.2	1296.3
35°	1172.9	1187.1	1215.4	1245.2	1253.7
37.5°	1117.6	1136.0	1167.2	1197.0	1205.5
40°	1059.4	1082.1	1117.6	1148.8	1158.7
42.5°	1004.1	1028.2	1063.7	1097.7	1109.1
45°	946.0	968.7	1011.2	1049.5	1058.0
47.5°	886.4	911.9	957.3	995.6	1009.8
50°	826.8	853.8	902.0	941.7	950.2
52.5°	767.3	795.6	846.7	889.2	893.5
55°	704.9	736.1	790.0	831.1	839.6
57.5°	648.1	675.1	733.2	775.8	785.7
60°	585.7	615.5	677.9	717.6	730.4
62.5°	526.2	557.4	622.6	662.3	673.7
65°	463.8	499.2	563.0	609.8	621.2
67.5°	409.9	443.9	512.0	557.4	568.7
70°	347.5	385.8	458.1	504.9	516.2
72.5°	293.6	333.3	405.6	451.0	468.0
75°	235.4	280.8	353.1	401.4	412.7
77.5°	178.7	231.2	304.9	341.8	341.8
80°	127.6	183.0	251.0	268.0	270.9
82.5°	83.7	137.6	185.8	184.4	184.4
85°	48.2	89.3	110.6	107.8	107.8
87.5°	18.4	36.9	39.7	39.7	38.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)