

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: P314320

Luminaire Tested: **24FCZ2-45HE-UNV-L83050-S-CA125-W2A-U-3000K**

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: P314320
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-CA125-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" ACRYLIC SHEET
Light Source: (336) 3000K 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: 4057.0 lumens
Efficiency: N/A
Efficacy: 120.4 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

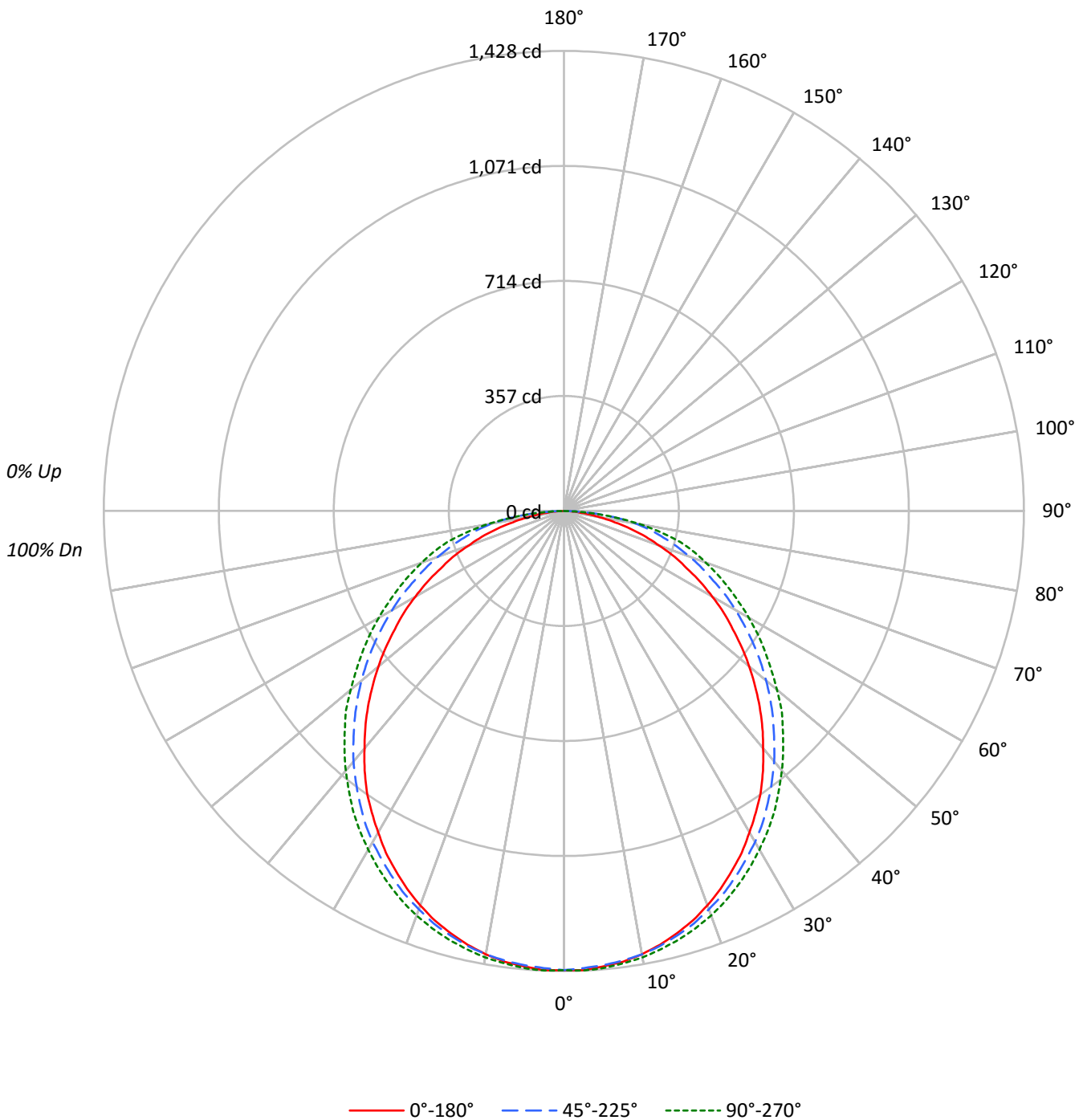
Input Watts (W): 33.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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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°	1918	1918	1918
5°	1916	1911	1923
10°	1909	1909	1923
15°	1890	1899	1919
20°	1865	1884	1913
25°	1831	1865	1902
30°	1790	1844	1886
35°	1750	1814	1871
40°	1691	1784	1849
45°	1635	1748	1829
50°	1573	1716	1807
55°	1502	1684	1790
60°	1432	1658	1786
65°	1342	1629	1797
70°	1242	1637	1845
75°	1112	1668	1949
80°	899	1767	1907
85°	676	1551	1511



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	134.9	3.3
10°-20°	385.5	9.5
20°-30°	579.6	14.3
30°-40°	690.3	17.0
40°-50°	706.5	17.4
50°-60°	636.1	15.7
60°-70°	499.5	12.3
70°-80°	324.2	8.0
80°-90°	100.3	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°	1100.0	27.1
0°-40°	1790.4	44.1
0°-60°	3133.0	77.2
0°-90°	4057.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4057.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1425	1425	1425	1425	1425	
5°	1419	1421	1415	1423	1424	135
15°	1357	1361	1363	1375	1378	383
25°	1233	1244	1256	1277	1281	568
35°	1066	1079	1104	1131	1139	665
45°	860	880	919	954	961	663
55°	640	669	718	755	763	574
65°	421	454	512	554	564	419
75°	214	255	321	365	375	226
85°	44	81	100	98	98	53
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1425.3	1425.3	1425.3	1425.3	1425.3
2.5°	1426.5	1426.5	1420.1	1426.5	1427.8
5°	1418.8	1421.4	1414.9	1422.7	1424.0
7.5°	1411.1	1411.1	1407.2	1414.9	1416.2
10°	1396.9	1398.2	1396.9	1405.9	1407.2
12.5°	1378.9	1381.4	1382.7	1391.7	1393.0
15°	1357.0	1360.8	1363.4	1375.0	1377.6
17.5°	1332.5	1336.3	1342.8	1355.7	1358.2
20°	1302.8	1308.0	1315.7	1332.5	1336.3
22.5°	1270.6	1275.8	1288.7	1304.1	1310.6
25°	1233.2	1243.6	1256.4	1277.1	1280.9
27.5°	1195.9	1204.9	1221.6	1243.6	1248.7
30°	1152.1	1166.2	1186.8	1208.8	1213.9
32.5°	1109.5	1123.7	1148.2	1171.4	1177.8
35°	1065.7	1078.6	1104.4	1131.4	1139.2
37.5°	1015.5	1032.2	1060.6	1087.6	1095.4
40°	962.6	983.2	1015.5	1043.8	1052.8
42.5°	912.4	934.3	966.5	997.4	1007.7
45°	859.5	880.2	918.8	953.6	961.3
47.5°	805.4	828.6	869.8	904.6	917.5
50°	751.3	775.8	819.6	855.7	863.4
52.5°	697.2	722.9	769.3	808.0	811.9
55°	640.5	668.8	717.8	755.2	762.9
57.5°	588.9	613.4	666.2	704.9	713.9
60°	532.2	559.3	616.0	652.1	663.7
62.5°	478.1	506.4	565.7	601.8	612.1
65°	421.4	453.6	511.6	554.1	564.4
67.5°	372.4	403.3	465.2	506.4	516.7
70°	315.7	350.5	416.2	458.8	469.1
72.5°	266.8	302.8	368.6	409.8	425.3
75°	213.9	255.2	320.9	364.7	375.0
77.5°	162.4	210.1	277.1	310.6	310.6
80°	116.0	166.2	228.1	243.6	246.1
82.5°	76.0	125.0	168.8	167.5	167.5
85°	43.8	81.2	100.5	97.9	97.9
87.5°	16.8	33.5	36.1	36.1	34.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)