

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: P313973

Luminaire Tested: **24FCZ2-45-UNV-L83050-CA125-W2A-U-4500K**

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: P313973
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-15)
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-CA125-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" ACRYLIC SHEET
Light Source: (168) 4500K 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

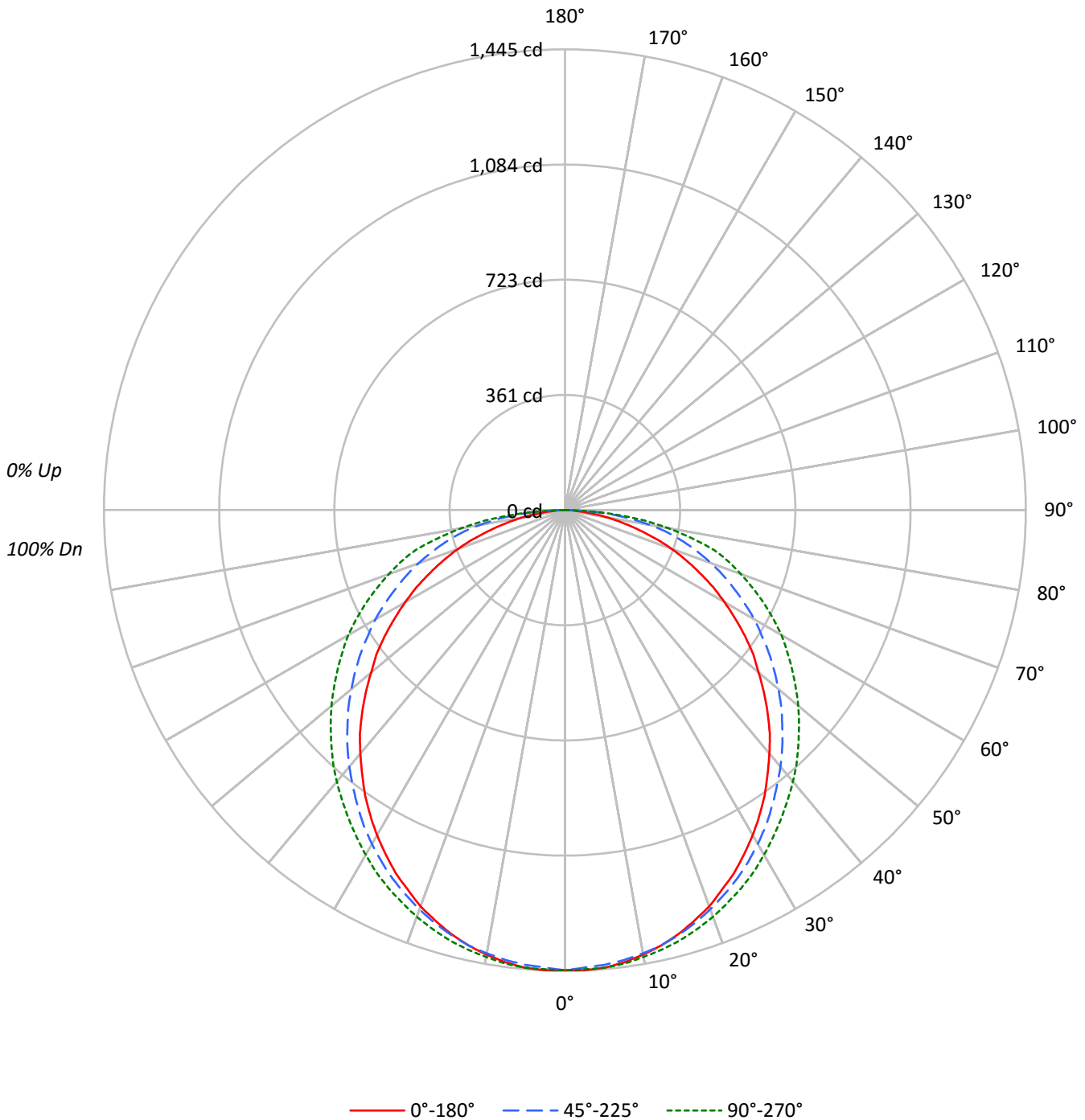
Lumens per Lamp: N/A
Luminaire Lumens: 4376.0 lumens
Efficiency: N/A
Efficacy: 111.1 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 39.4
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	98	94	105	100	96	92	96	92	89	92	89	87	88	86	84	82
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	79	67	58	52	64	57	51	62	56	50	60	54	50	47
5	74	61	52	45	72	60	51	44	58	50	44	56	49	43	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	64	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	37	31	57	45	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1942	1942	1942
5°	1945	1934	1945
10°	1934	1928	1944
15°	1917	1921	1946
20°	1894	1908	1944
25°	1864	1895	1942
30°	1829	1879	1940
35°	1793	1860	1941
40°	1752	1846	1953
45°	1710	1834	1970
50°	1659	1829	2000
55°	1618	1832	2040
60°	1555	1848	2110
65°	1484	1868	2186
70°	1405	1925	2308
75°	1253	2008	2521
80°	1068	2126	2576
85°	763	2107	2465



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	136.6	3.1
10°-20°	390.5	8.9
20°-30°	589.9	13.5
30°-40°	710.9	16.2
40°-50°	746.3	17.1
50°-60°	698.2	16.0
60°-70°	576.6	13.2
70°-80°	392.9	9.0
80°-90°	134.0	3.1
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°	1117.0	25.5
0°-40°	1827.9	41.8
0°-60°	3272.5	74.8
0°-90°	4376.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4376.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1443	1443	1443	1443	1443	
5°	1440	1439	1432	1440	1440	137
15°	1376	1378	1379	1394	1397	388
25°	1256	1262	1276	1301	1308	578
35°	1092	1103	1132	1170	1182	682
45°	899	918	964	1016	1035	693
55°	690	717	781	845	870	616
65°	466	505	587	661	687	462
75°	241	296	386	459	485	257
85°	49	97	136	154	160	62
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1443.2	1443.2	1443.2	1443.2	1443.2
2.5°	1444.6	1443.2	1435.9	1443.2	1441.7
5°	1440.3	1438.8	1431.6	1440.3	1440.3
7.5°	1430.1	1430.1	1422.8	1433.0	1434.5
10°	1415.6	1415.6	1411.2	1422.8	1422.8
12.5°	1398.2	1398.2	1398.2	1409.8	1411.2
15°	1376.4	1377.8	1379.3	1393.8	1396.7
17.5°	1350.2	1353.2	1357.5	1374.9	1377.8
20°	1322.7	1325.6	1332.8	1353.2	1357.5
22.5°	1287.8	1295.1	1305.2	1328.5	1332.8
25°	1255.9	1261.7	1276.2	1300.9	1308.1
27.5°	1216.7	1225.4	1244.3	1270.4	1280.6
30°	1177.5	1186.2	1209.4	1239.9	1248.6
32.5°	1135.4	1148.4	1173.1	1205.1	1215.2
35°	1091.8	1103.4	1132.5	1170.2	1181.8
37.5°	1043.9	1059.9	1091.8	1132.5	1147.0
40°	997.4	1014.9	1051.2	1094.7	1112.1
42.5°	951.0	968.4	1009.1	1058.4	1075.8
45°	898.7	917.6	964.0	1016.3	1035.2
47.5°	846.4	869.7	920.5	975.7	996.0
50°	792.7	818.9	874.0	932.1	955.3
52.5°	744.8	769.5	827.6	890.0	911.8
55°	689.6	717.2	781.1	845.0	869.7
57.5°	633.0	663.5	731.7	801.4	826.1
60°	577.8	611.2	686.7	756.4	784.0
62.5°	524.1	557.5	635.9	708.5	736.1
65°	466.1	505.3	586.6	660.6	686.7
67.5°	410.9	453.0	538.6	611.2	637.4
70°	357.2	397.8	489.3	560.4	586.6
72.5°	299.1	345.5	437.0	511.1	538.6
75°	241.0	296.2	386.2	458.8	484.9
77.5°	187.3	243.9	333.9	393.5	406.5
80°	137.9	196.0	274.4	316.5	332.5
82.5°	88.6	146.6	209.1	239.6	252.6
85°	49.4	97.3	136.5	153.9	159.7
87.5°	20.3	42.1	55.2	62.4	62.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)