

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: P313945

Luminaire Tested: **24FCZ2-45HE-UNV-L83050-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: P313945
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: 24FCZ2-45HE-UNV-L83050-CA125-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, RIBBED 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: 3861.0 lumens
Efficiency: N/A
Efficacy: 114.6 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

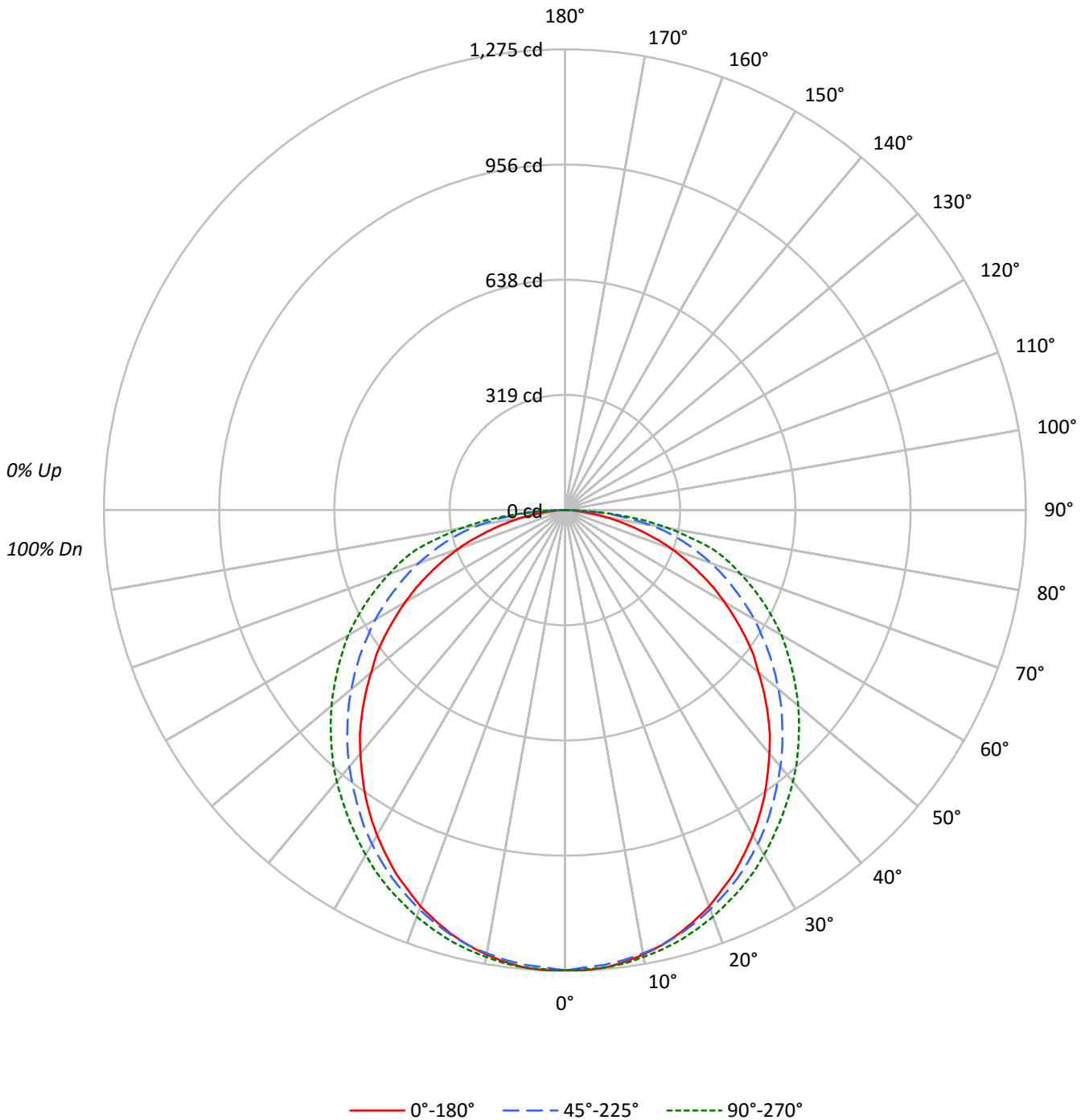
Input Watts (W): 33.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1713	1713	1713
5°	1716	1706	1716
10°	1706	1701	1715
15°	1692	1695	1717
20°	1671	1684	1715
25°	1645	1672	1714
30°	1614	1658	1712
35°	1582	1641	1713
40°	1546	1629	1724
45°	1509	1619	1738
50°	1464	1614	1764
55°	1427	1617	1800
60°	1372	1630	1861
65°	1309	1648	1929
70°	1240	1698	2036
75°	1105	1771	2224
80°	943	1876	2273
85°	673	1859	2175



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	120.5	3.1
10°-20°	344.6	8.9
20°-30°	520.4	13.5
30°-40°	627.3	16.2
40°-50°	658.5	17.1
50°-60°	616.1	16.0
60°-70°	508.8	13.2
70°-80°	346.7	9.0
80°-90°	118.2	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°	985.5	25.5
0°-40°	1612.8	41.8
0°-60°	2887.3	74.8
0°-90°	3861.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3861.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1273	1273	1273	1273	1273	
5°	1271	1270	1263	1271	1271	121
15°	1214	1216	1217	1230	1232	342
25°	1108	1113	1126	1148	1154	510
35°	963	974	999	1032	1043	602
45°	793	810	851	897	913	612
55°	608	633	689	746	767	543
65°	411	446	518	583	606	408
75°	213	261	341	405	428	227
85°	44	86	120	136	141	55
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1273.3	1273.3	1273.3	1273.3	1273.3
2.5°	1274.6	1273.3	1266.9	1273.3	1272.0
5°	1270.8	1269.5	1263.1	1270.8	1270.8
7.5°	1261.8	1261.8	1255.4	1264.4	1265.6
10°	1249.0	1249.0	1245.1	1255.4	1255.4
12.5°	1233.6	1233.6	1233.6	1243.9	1245.1
15°	1214.4	1215.7	1217.0	1229.8	1232.3
17.5°	1191.3	1193.9	1197.7	1213.1	1215.7
20°	1167.0	1169.6	1176.0	1193.9	1197.7
22.5°	1136.3	1142.7	1151.6	1172.1	1176.0
25°	1108.1	1113.2	1126.0	1147.8	1154.2
27.5°	1073.5	1081.2	1097.8	1120.9	1129.9
30°	1038.9	1046.6	1067.1	1094.0	1101.7
32.5°	1001.8	1013.3	1035.1	1063.2	1072.2
35°	963.3	973.6	999.2	1032.5	1042.7
37.5°	921.0	935.1	963.3	999.2	1012.0
40°	880.1	895.4	927.5	965.9	981.3
42.5°	839.1	854.4	890.3	933.9	949.2
45°	792.9	809.6	850.6	896.7	913.4
47.5°	746.8	767.3	812.2	860.8	878.8
50°	699.4	722.5	771.2	822.4	842.9
52.5°	657.2	678.9	730.2	785.3	804.5
55°	608.5	632.8	689.2	745.5	767.3
57.5°	558.5	585.4	645.6	707.1	728.9
60°	509.8	539.3	605.9	667.4	691.7
62.5°	462.4	491.9	561.1	625.1	649.5
65°	411.2	445.8	517.5	582.9	605.9
67.5°	362.5	399.7	475.3	539.3	562.4
70°	315.1	351.0	431.7	494.5	517.5
72.5°	263.9	304.9	385.6	450.9	475.3
75°	212.6	261.3	340.7	404.8	427.9
77.5°	165.3	215.2	294.6	347.2	358.7
80°	121.7	172.9	242.1	279.3	293.4
82.5°	78.1	129.4	184.5	211.4	222.9
85°	43.6	85.8	120.4	135.8	140.9
87.5°	17.9	37.1	48.7	55.1	55.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)