

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: P310848

Luminaire Tested: **24FCZ2-45-UNV-L82765-CP250-W2A-U-5700K**

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: P310848
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-L82765-CP250-W2A-U-5700K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.250" POLYCARB SHEET
Light Source: (168) 5700K 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: 4009.0 lumens
Efficiency: N/A
Efficacy: 103.6 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

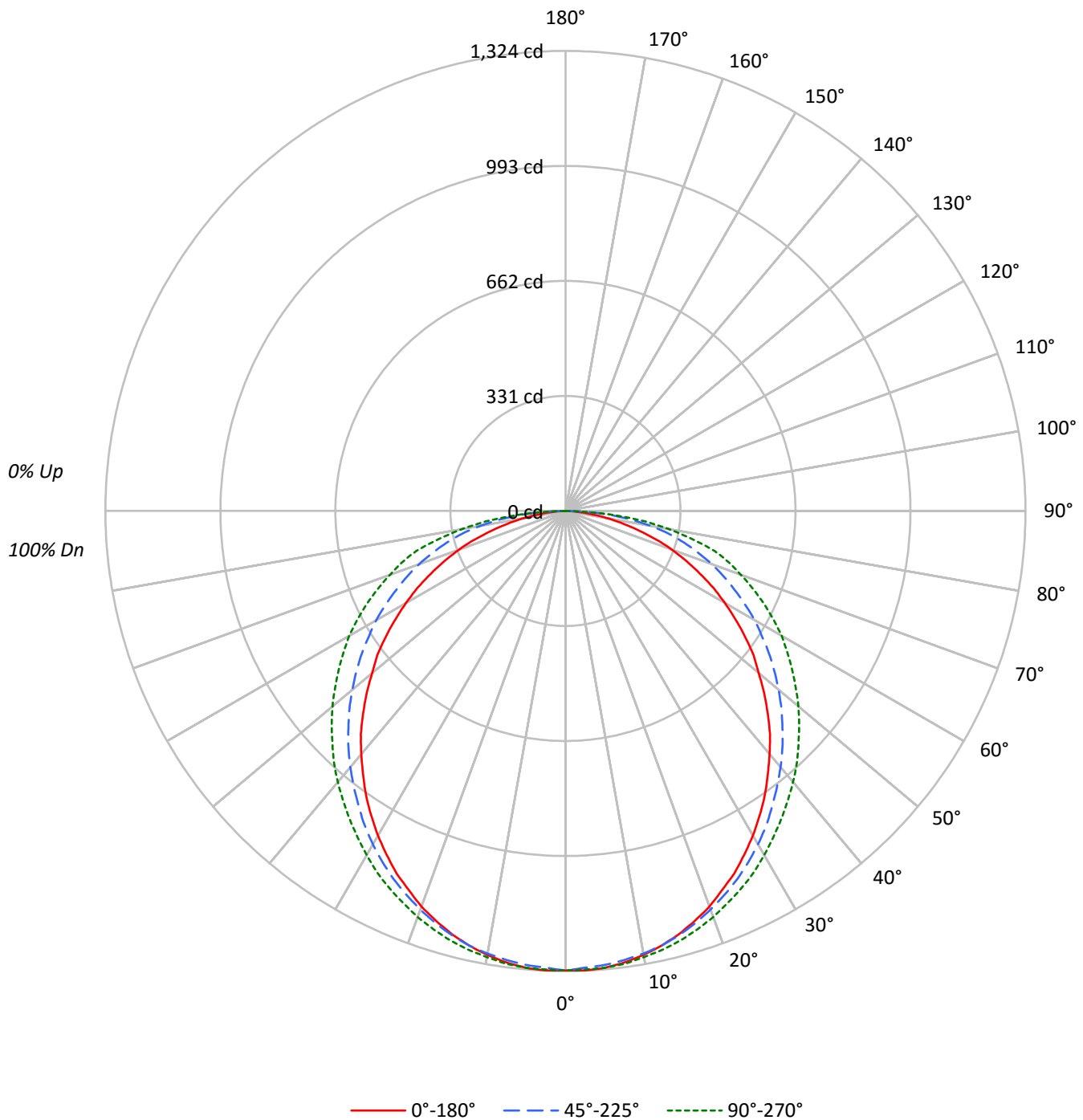
Input Watts (W): 38.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				0
RW	70	50	30	10	70	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		100
1	108	103	98	94	105	100	96	92	96	92	89		92	89	87		82
2	98	89	81	75	95	87	80	74	83	78	73		80	75	71		67
3	89	77	69	62	86	76	68	61	73	66	60		70	64	59		56
4	81	68	59	52	79	67	58	52	64	57	51		62	56	50		47
5	74	61	52	45	72	60	51	44	58	50	44		56	49	43		41
6	69	55	46	39	67	54	45	39	52	44	38		50	43	38		36
7	64	50	41	34	62	49	40	34	47	39	34		46	39	34		31
8	59	45	37	31	57	45	36	30	43	36	30		42	35	30		28
9	55	41	33	27	54	41	33	27	40	32	27		39	32	27		25
10	52	38	30	25	50	38	30	25	37	30	25		36	29	25		23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1779	1779	1779
5°	1782	1771	1782
10°	1772	1766	1781
15°	1756	1760	1782
20°	1735	1748	1781
25°	1708	1736	1779
30°	1676	1721	1777
35°	1643	1704	1778
40°	1605	1691	1790
45°	1567	1681	1805
50°	1520	1676	1832
55°	1482	1679	1869
60°	1425	1693	1933
65°	1359	1711	2003
70°	1287	1763	2114
75°	1148	1839	2310
80°	979	1948	2360
85°	698	1930	2259



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	125.1	3.1
10°-20°	357.8	8.9
20°-30°	540.4	13.5
30°-40°	651.3	16.2
40°-50°	683.7	17.1
50°-60°	639.7	16.0
60°-70°	528.3	13.2
70°-80°	360.0	9.0
80°-90°	122.8	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°	1023.3	25.5
0°-40°	1674.6	41.8
0°-60°	2998.0	74.8
0°-90°	4009.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4009.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1322	1322	1322	1322	1322	
5°	1320	1318	1312	1320	1320	125
15°	1261	1262	1264	1277	1280	355
25°	1150	1156	1169	1192	1198	529
35°	1000	1011	1038	1072	1083	625
45°	823	841	883	931	948	635
55°	632	657	716	774	797	564
65°	427	463	537	605	629	424
75°	221	271	354	420	444	235
85°	45	89	125	141	146	57
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1322.1	1322.1	1322.1	1322.1	1322.1
2.5°	1323.5	1322.1	1315.5	1322.1	1320.8
5°	1319.5	1318.1	1311.5	1319.5	1319.5
7.5°	1310.2	1310.2	1303.5	1312.8	1314.2
10°	1296.9	1296.9	1292.9	1303.5	1303.5
12.5°	1280.9	1280.9	1280.9	1291.5	1292.9
15°	1260.9	1262.3	1263.6	1276.9	1279.6
17.5°	1237.0	1239.7	1243.7	1259.6	1262.3
20°	1211.7	1214.4	1221.0	1239.7	1243.7
22.5°	1179.8	1186.5	1195.8	1217.1	1221.0
25°	1150.5	1155.9	1169.2	1191.8	1198.4
27.5°	1114.6	1122.6	1139.9	1163.8	1173.2
30°	1078.7	1086.7	1108.0	1135.9	1143.9
32.5°	1040.1	1052.1	1074.7	1104.0	1113.3
35°	1000.2	1010.9	1037.5	1072.1	1082.7
37.5°	956.4	971.0	1000.2	1037.5	1050.8
40°	913.8	929.7	963.0	1002.9	1018.9
42.5°	871.2	887.2	924.4	969.7	985.6
45°	823.3	840.6	883.2	931.1	948.4
47.5°	775.5	796.7	843.3	893.8	912.5
50°	726.2	750.2	800.7	853.9	875.2
52.5°	682.3	705.0	758.2	815.4	835.3
55°	631.8	657.1	715.6	774.1	796.7
57.5°	579.9	607.9	670.4	734.2	756.8
60°	529.4	560.0	629.1	693.0	718.3
62.5°	480.2	510.8	582.6	649.1	674.4
65°	427.0	462.9	537.4	605.2	629.1
67.5°	376.4	415.0	493.5	560.0	583.9
70°	327.2	364.5	448.2	513.4	537.4
72.5°	274.0	316.6	400.4	468.2	493.5
75°	220.8	271.3	353.8	420.3	444.3
77.5°	171.6	223.5	305.9	360.5	372.4
80°	126.4	179.6	251.4	290.0	304.6
82.5°	81.1	134.3	191.5	219.5	231.4
85°	45.2	89.1	125.0	141.0	146.3
87.5°	18.6	38.6	50.5	57.2	57.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)