

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: P311433

Luminaire Tested: **24FCZ2-40-UNV-L82765-S-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: P311433
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: 24FCZ2-40-UNV-L82765-S-CP250-W2A-U-5700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH 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: 3762.0 lumens
Efficiency: N/A
Efficacy: 112.0 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

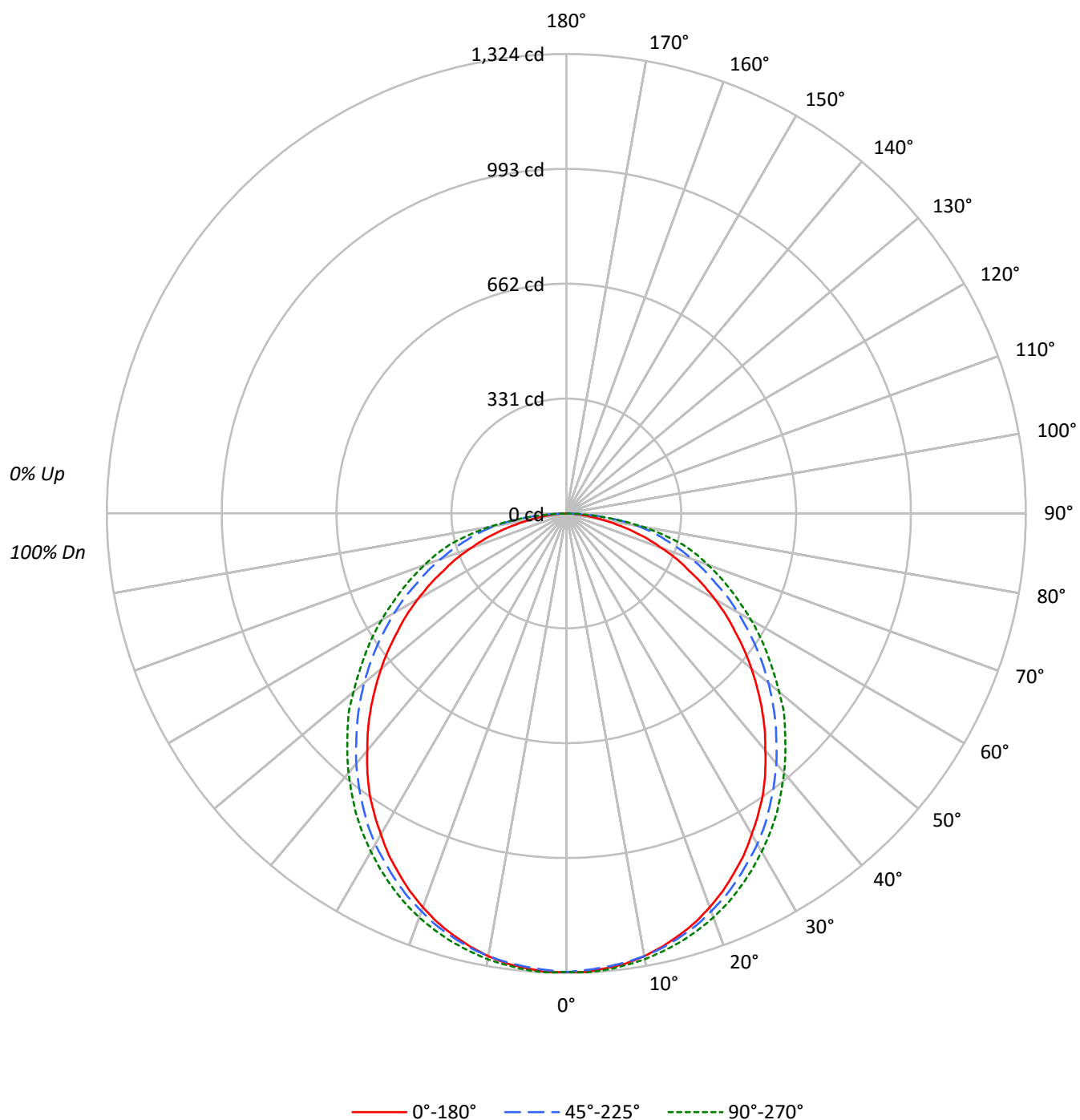
Input Watts (W): 33.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	99	95	106	101	97	93	97	93	90		93	90	88		83
2	98	90	83	77	96	88	81	76	84	79	74		81	76	72		69
3	89	79	70	64	87	77	69	63	74	67	62		71	66	61		58
4	82	70	61	54	80	68	60	54	66	59	53		63	57	52		49
5	75	62	53	46	73	61	53	46	59	51	46		57	50	45		42
6	70	56	47	40	68	55	47	40	53	46	40		52	45	40		37
7	64	51	42	36	63	50	42	36	48	41	35		47	40	35		33
8	60	46	38	32	58	46	37	32	44	37	32		43	36	31		29
9	56	43	34	29	55	42	34	29	41	34	28		40	33	28		26
10	53	39	31	26	51	39	31	26	38	31	26		37	30	26		24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1778	1778	1778
5°	1777	1772	1783
10°	1770	1770	1783
15°	1753	1761	1779
20°	1730	1747	1774
25°	1698	1730	1763
30°	1660	1710	1749
35°	1623	1682	1735
40°	1568	1654	1715
45°	1517	1621	1696
50°	1458	1591	1676
55°	1393	1561	1659
60°	1328	1537	1656
65°	1244	1510	1666
70°	1152	1519	1711
75°	1031	1547	1808
80°	833	1639	1768
85°	627	1439	1402



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	125.1	3.3
10°-20°	357.5	9.5
20°-30°	537.4	14.3
30°-40°	640.1	17.0
40°-50°	655.2	17.4
50°-60°	589.8	15.7
60°-70°	463.2	12.3
70°-80°	300.6	8.0
80°-90°	93.0	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°	1020.0	27.1
0°-40°	1660.2	44.1
0°-60°	2905.2	77.2
0°-90°	3762.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3762.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1322	1322	1322	1322	1322	
5°	1316	1318	1312	1319	1320	125
15°	1258	1262	1264	1275	1277	355
25°	1144	1153	1165	1184	1188	527
35°	988	1000	1024	1049	1056	616
45°	797	816	852	884	891	614
55°	594	620	666	700	707	532
65°	391	421	474	514	523	389
75°	198	237	298	338	348	210
85°	41	75	93	91	91	49
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1321.6	1321.6	1321.6	1321.6	1321.6
2.5°	1322.8	1322.8	1316.8	1322.8	1324.0
5°	1315.6	1318.0	1312.1	1319.2	1320.4
7.5°	1308.5	1308.5	1304.9	1312.1	1313.3
10°	1295.3	1296.5	1295.3	1303.7	1304.9
12.5°	1278.6	1281.0	1282.2	1290.5	1291.7
15°	1258.3	1261.9	1264.3	1275.0	1277.4
17.5°	1235.6	1239.2	1245.1	1257.1	1259.5
20°	1208.1	1212.9	1220.0	1235.6	1239.2
22.5°	1178.2	1183.0	1195.0	1209.3	1215.3
25°	1143.6	1153.1	1165.1	1184.2	1187.8
27.5°	1108.9	1117.3	1132.8	1153.1	1157.9
30°	1068.3	1081.4	1100.5	1120.9	1125.6
32.5°	1028.9	1042.0	1064.7	1086.2	1092.2
35°	988.2	1000.2	1024.1	1049.2	1056.3
37.5°	941.6	957.2	983.4	1008.5	1015.7
40°	892.6	911.7	941.6	967.9	976.3
42.5°	846.0	866.3	896.2	924.9	934.5
45°	797.0	816.2	852.0	884.3	891.4
47.5°	746.8	768.4	806.6	838.9	850.8
50°	696.7	719.4	760.0	793.4	800.6
52.5°	646.5	670.4	713.4	749.2	752.8
55°	593.9	620.2	665.6	700.2	707.4
57.5°	546.1	568.8	617.8	653.6	662.0
60°	493.5	518.6	571.2	604.6	615.4
62.5°	443.3	469.6	524.6	558.0	567.6
65°	390.7	420.6	474.4	513.8	523.4
67.5°	345.3	374.0	431.4	469.6	479.2
70°	292.8	325.0	386.0	425.4	435.0
72.5°	247.4	280.8	341.8	380.0	394.3
75°	198.4	236.6	297.5	338.2	347.7
77.5°	150.6	194.8	256.9	288.0	288.0
80°	107.5	154.1	211.5	225.8	228.2
82.5°	70.5	115.9	156.5	155.3	155.3
85°	40.6	75.3	93.2	90.8	90.8
87.5°	15.5	31.1	33.5	33.5	32.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)