

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: P310823

Luminaire Tested: **24FCZ2-45-UNV-L82765-CP125-W2A-U-2700K**

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: P310823
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-CP125-W2A-U-2700K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" POLYCARB SHEET
Light Source: (168) 2700K 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: 3715.0 lumens
Efficiency: N/A
Efficacy: 98.8 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

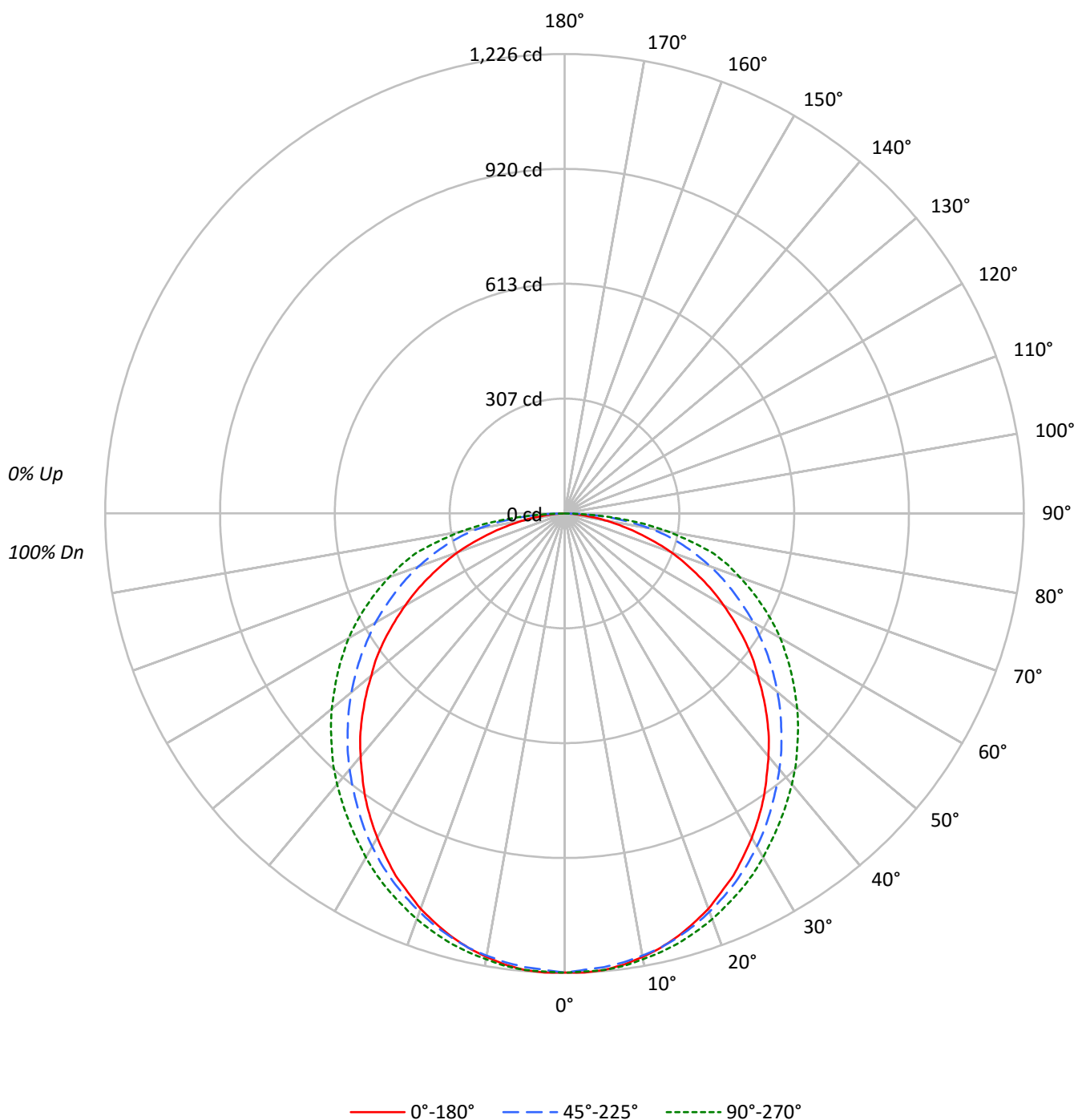
Input Watts (W): 37.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1648	1648	1648
5°	1651	1641	1651
10°	1642	1637	1650
15°	1628	1631	1652
20°	1608	1620	1650
25°	1583	1608	1649
30°	1553	1595	1647
35°	1522	1579	1648
40°	1487	1567	1658
45°	1452	1557	1672
50°	1409	1553	1698
55°	1373	1555	1732
60°	1320	1569	1791
65°	1260	1585	1856
70°	1193	1634	1959
75°	1064	1705	2140
80°	907	1805	2187
85°	647	1789	2093



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	115.9	3.1
10°-20°	331.5	8.9
20°-30°	500.8	13.5
30°-40°	603.5	16.2
40°-50°	633.6	17.1
50°-60°	592.8	16.0
60°-70°	489.5	13.2
70°-80°	333.6	9.0
80°-90°	113.8	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°	948.3	25.5
0°-40°	1551.8	41.8
0°-60°	2778.2	74.8
0°-90°	3715.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3715.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1225	1225	1225	1225	1225	
5°	1223	1222	1215	1223	1223	116
15°	1168	1170	1171	1183	1186	329
25°	1066	1071	1083	1104	1110	491
35°	927	937	961	994	1003	579
45°	763	779	818	863	879	588
55°	586	609	663	717	738	523
65°	396	429	498	561	583	392
75°	205	251	328	390	412	218
85°	42	83	116	131	136	52
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1225.2	1225.2	1225.2	1225.2	1225.2
2.5°	1226.4	1225.2	1219.0	1225.2	1223.9
5°	1222.7	1221.5	1215.3	1222.7	1222.7
7.5°	1214.1	1214.1	1207.9	1216.5	1217.8
10°	1201.8	1201.8	1198.1	1207.9	1207.9
12.5°	1187.0	1187.0	1187.0	1196.8	1198.1
15°	1168.5	1169.7	1170.9	1183.3	1185.7
17.5°	1146.3	1148.8	1152.5	1167.2	1169.7
20°	1122.9	1125.3	1131.5	1148.8	1152.5
22.5°	1093.3	1099.5	1108.1	1127.8	1131.5
25°	1066.2	1071.1	1083.4	1104.4	1110.5
27.5°	1032.9	1040.3	1056.3	1078.5	1087.1
30°	999.6	1007.0	1026.7	1052.6	1060.0
32.5°	963.9	975.0	995.9	1023.0	1031.7
35°	926.9	936.8	961.4	993.5	1003.3
37.5°	886.2	899.8	926.9	961.4	973.7
40°	846.8	861.6	892.4	929.4	944.1
42.5°	807.3	822.1	856.6	898.5	913.3
45°	763.0	779.0	818.4	862.8	878.8
47.5°	718.6	738.3	781.4	828.3	845.5
50°	673.0	695.2	742.0	791.3	811.0
52.5°	632.3	653.3	702.6	755.6	774.1
55°	585.5	608.9	663.1	717.4	738.3
57.5°	537.4	563.3	621.2	680.4	701.3
60°	490.6	518.9	583.0	642.2	665.6
62.5°	445.0	473.3	539.9	601.5	624.9
65°	395.7	428.9	498.0	560.8	583.0
67.5°	348.8	384.6	457.3	518.9	541.1
70°	303.2	337.7	415.4	475.8	498.0
72.5°	253.9	293.4	371.0	433.9	457.3
75°	204.6	251.4	327.9	389.5	411.7
77.5°	159.0	207.1	283.5	334.0	345.1
80°	117.1	166.4	233.0	268.7	282.3
82.5°	75.2	124.5	177.5	203.4	214.5
85°	41.9	82.6	115.9	130.7	135.6
87.5°	17.3	35.7	46.8	53.0	53.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)