

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: P310849

Luminaire Tested: **24FCZ2-45-UNV-L82765-CP250-W2A-U-6500K**

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: P310849
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-6500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.250" POLYCARB SHEET
Light Source: (168) 6500K 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: 4019.0 lumens
Efficiency: N/A
Efficacy: 102.3 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

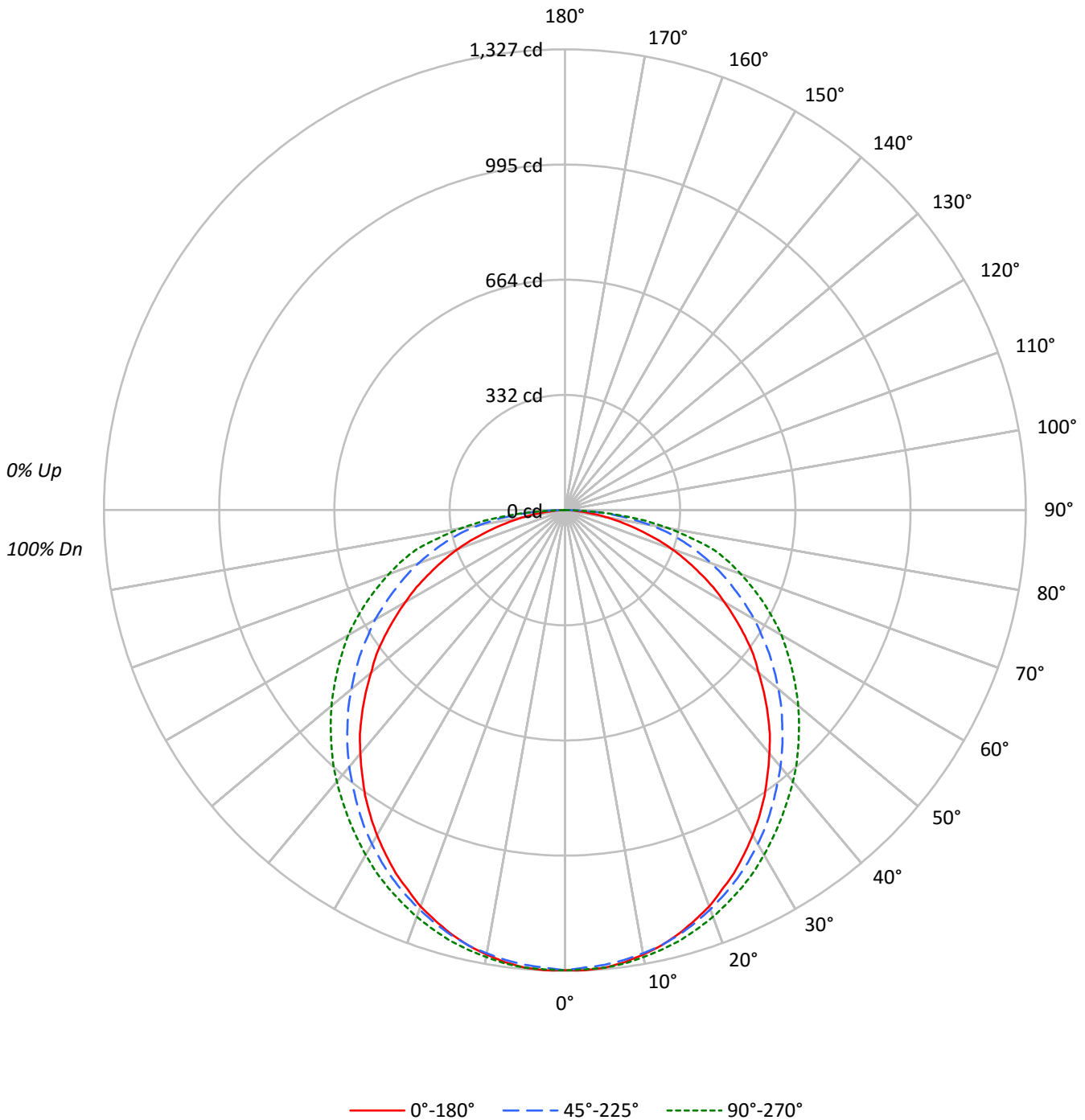
Input Watts (W): 39.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1783	1783	1783
5°	1787	1776	1787
10°	1776	1771	1785
15°	1761	1765	1787
20°	1739	1753	1785
25°	1712	1740	1784
30°	1680	1726	1782
35°	1647	1708	1783
40°	1609	1696	1794
45°	1571	1685	1809
50°	1524	1680	1837
55°	1486	1683	1874
60°	1428	1697	1938
65°	1363	1715	2008
70°	1290	1768	2119
75°	1150	1844	2315
80°	982	1953	2366
85°	699	1934	2265



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	125.4	3.1
10°-20°	358.7	8.9
20°-30°	541.7	13.5
30°-40°	652.9	16.2
40°-50°	685.4	17.1
50°-60°	641.3	16.0
60°-70°	529.6	13.2
70°-80°	360.9	9.0
80°-90°	123.1	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°	1025.9	25.5
0°-40°	1678.8	41.8
0°-60°	3005.5	74.8
0°-90°	4019.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4019.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1325	1325	1325	1325	1325	
5°	1323	1321	1315	1323	1323	126
15°	1264	1265	1267	1280	1283	356
25°	1153	1159	1172	1195	1201	531
35°	1003	1013	1040	1075	1085	627
45°	825	843	885	933	951	637
55°	633	659	717	776	799	565
65°	428	464	539	607	631	425
75°	221	272	355	421	445	236
85°	45	89	125	141	147	57
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1325.4	1325.4	1325.4	1325.4	1325.4
2.5°	1326.8	1325.4	1318.8	1325.4	1324.1
5°	1322.8	1321.4	1314.8	1322.8	1322.8
7.5°	1313.4	1313.4	1306.8	1316.1	1317.4
10°	1300.1	1300.1	1296.1	1306.8	1306.8
12.5°	1284.1	1284.1	1284.1	1294.8	1296.1
15°	1264.1	1265.4	1266.8	1280.1	1282.8
17.5°	1240.1	1242.8	1246.8	1262.8	1265.4
20°	1214.8	1217.4	1224.1	1242.8	1246.8
22.5°	1182.8	1189.4	1198.8	1220.1	1224.1
25°	1153.4	1158.8	1172.1	1194.8	1201.4
27.5°	1117.4	1125.4	1142.8	1166.8	1176.1
30°	1081.4	1089.4	1110.7	1138.8	1146.8
32.5°	1042.7	1054.7	1077.4	1106.7	1116.1
35°	1002.7	1013.4	1040.1	1074.7	1085.4
37.5°	958.7	973.4	1002.7	1040.1	1053.4
40°	916.1	932.1	965.4	1005.4	1021.4
42.5°	873.4	889.4	926.7	972.1	988.1
45°	825.4	842.7	885.4	933.4	950.7
47.5°	777.4	798.7	845.4	896.1	914.7
50°	728.1	752.1	802.7	856.1	877.4
52.5°	684.1	706.7	760.1	817.4	837.4
55°	633.4	658.7	717.4	776.1	798.7
57.5°	581.4	609.4	672.0	736.1	758.7
60°	530.7	561.4	630.7	694.7	720.1
62.5°	481.4	512.0	584.0	650.7	676.0
65°	428.0	464.0	538.7	606.7	630.7
67.5°	377.4	416.0	494.7	561.4	585.4
70°	328.0	365.4	449.4	514.7	538.7
72.5°	274.7	317.4	401.4	469.4	494.7
75°	221.3	272.0	354.7	421.4	445.4
77.5°	172.0	224.0	306.7	361.4	373.4
80°	126.7	180.0	252.0	290.7	305.4
82.5°	81.3	134.7	192.0	220.0	232.0
85°	45.3	89.3	125.3	141.3	146.7
87.5°	18.7	38.7	50.7	57.3	57.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)