

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: P313917

Luminaire Tested: **24FCZ2-40-UNV-L83050-CA08-W2A-U-4000K**

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: P313917
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: 24FCZ2-40-UNV-L83050-CA08-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.08" ACRYLIC SHEET
Light Source: (168) 4000K 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: 3886.0 lumens
Efficiency: N/A
Efficacy: 116.0 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

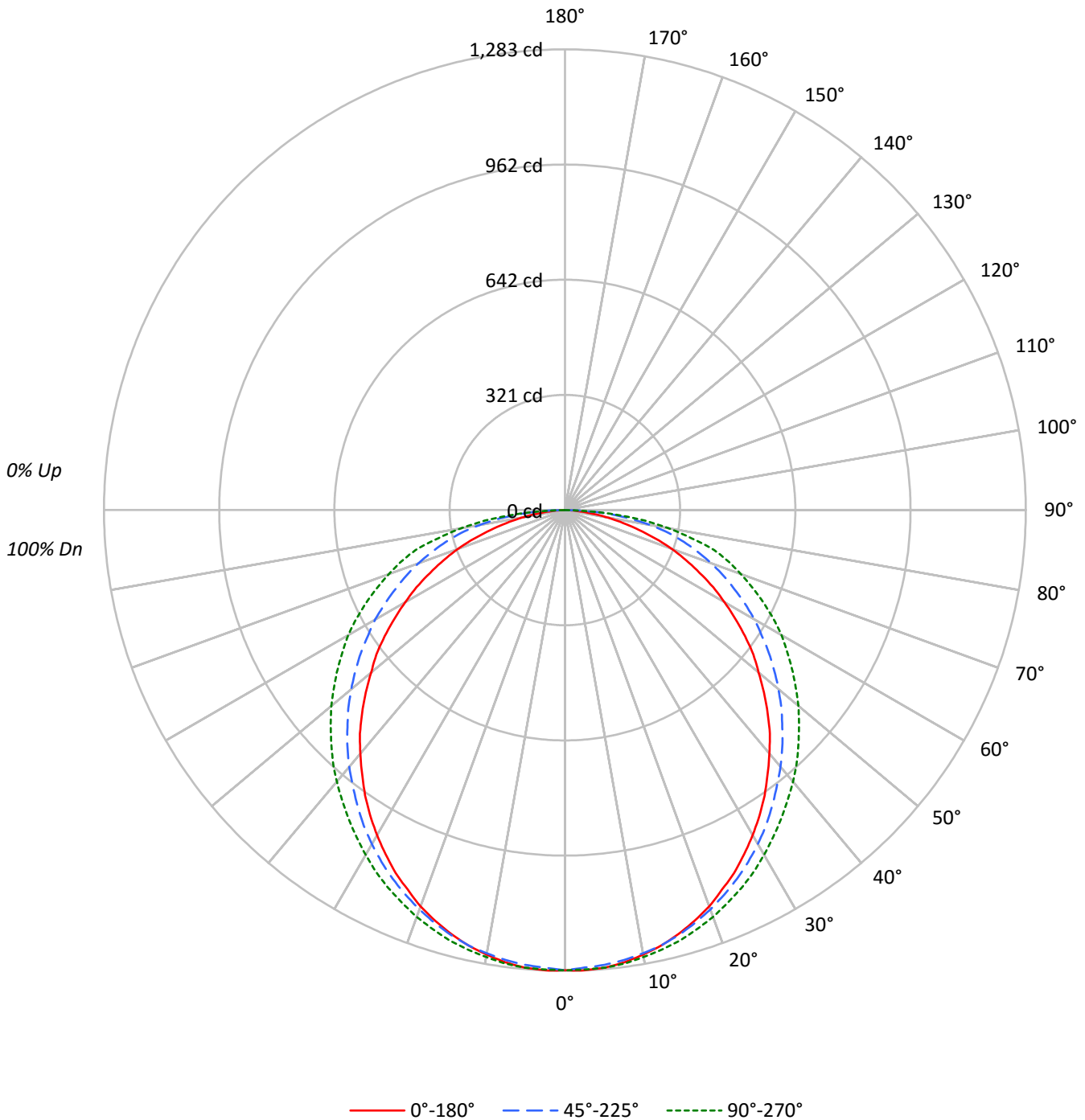
Input Watts (W): 33.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1724	1724	1724
5°	1727	1717	1727
10°	1718	1712	1726
15°	1703	1706	1728
20°	1682	1695	1726
25°	1656	1682	1725
30°	1624	1669	1723
35°	1593	1652	1724
40°	1556	1640	1735
45°	1519	1629	1749
50°	1474	1625	1776
55°	1437	1627	1812
60°	1381	1641	1873
65°	1318	1658	1941
70°	1248	1709	2049
75°	1112	1783	2239
80°	949	1888	2288
85°	676	1871	2189



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	121.3	3.1
10°-20°	346.8	8.9
20°-30°	523.8	13.5
30°-40°	631.3	16.2
40°-50°	662.8	17.1
50°-60°	620.0	16.0
60°-70°	512.1	13.2
70°-80°	348.9	9.0
80°-90°	119.0	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°	991.9	25.5
0°-40°	1623.2	41.8
0°-60°	2906.0	74.8
0°-90°	3886.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3886.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1282	1282	1282	1282	1282	
5°	1279	1278	1271	1279	1279	121
15°	1222	1224	1225	1238	1240	345
25°	1115	1120	1133	1155	1162	513
35°	970	980	1006	1039	1050	606
45°	798	815	856	902	919	616
55°	612	637	694	750	772	547
65°	414	449	521	587	610	411
75°	214	263	343	407	431	228
85°	44	86	121	137	142	55
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1281.6	1281.6	1281.6	1281.6	1281.6
2.5°	1282.9	1281.6	1275.1	1281.6	1280.3
5°	1279.0	1277.7	1271.3	1279.0	1279.0
7.5°	1270.0	1270.0	1263.5	1272.5	1273.8
10°	1257.1	1257.1	1253.2	1263.5	1263.5
12.5°	1241.6	1241.6	1241.6	1251.9	1253.2
15°	1222.3	1223.6	1224.8	1237.7	1240.3
17.5°	1199.1	1201.6	1205.5	1221.0	1223.6
20°	1174.6	1177.1	1183.6	1201.6	1205.5
22.5°	1143.6	1150.1	1159.1	1179.7	1183.6
25°	1115.2	1120.4	1133.3	1155.2	1161.7
27.5°	1080.4	1088.2	1104.9	1128.1	1137.2
30°	1045.6	1053.4	1074.0	1101.1	1108.8
32.5°	1008.2	1019.8	1041.8	1070.1	1079.1
35°	969.6	979.9	1005.7	1039.2	1049.5
37.5°	927.0	941.2	969.6	1005.7	1018.6
40°	885.8	901.2	933.5	972.1	987.6
42.5°	844.5	860.0	896.1	939.9	955.4
45°	798.1	814.8	856.1	902.5	919.3
47.5°	751.7	772.3	817.4	866.4	884.5
50°	704.0	727.2	776.2	827.7	848.4
52.5°	661.4	683.3	734.9	790.3	809.7
55°	612.4	636.9	693.6	750.4	772.3
57.5°	562.1	589.2	649.8	711.7	733.6
60°	513.1	542.8	609.8	671.7	696.2
62.5°	465.4	495.1	564.7	629.2	653.7
65°	413.9	448.7	520.9	586.6	609.8
67.5°	364.9	402.3	478.3	542.8	566.0
70°	317.2	353.3	434.5	497.7	520.9
72.5°	265.6	306.9	388.1	453.8	478.3
75°	214.0	263.0	343.0	407.4	430.6
77.5°	166.3	216.6	296.5	349.4	361.0
80°	122.5	174.1	243.7	281.1	295.3
82.5°	78.6	130.2	185.7	212.7	224.3
85°	43.8	86.4	121.2	136.7	141.8
87.5°	18.1	37.4	49.0	55.4	55.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)