

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: P313915

Luminaire Tested: **24FCZ2-40-UNV-L83050-CA08-W2A-U-3000K**

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: P313915
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-3000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.08" ACRYLIC SHEET
Light Source: (168) 3000K 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: 3497.0 lumens
Efficiency: N/A
Efficacy: 107.3 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

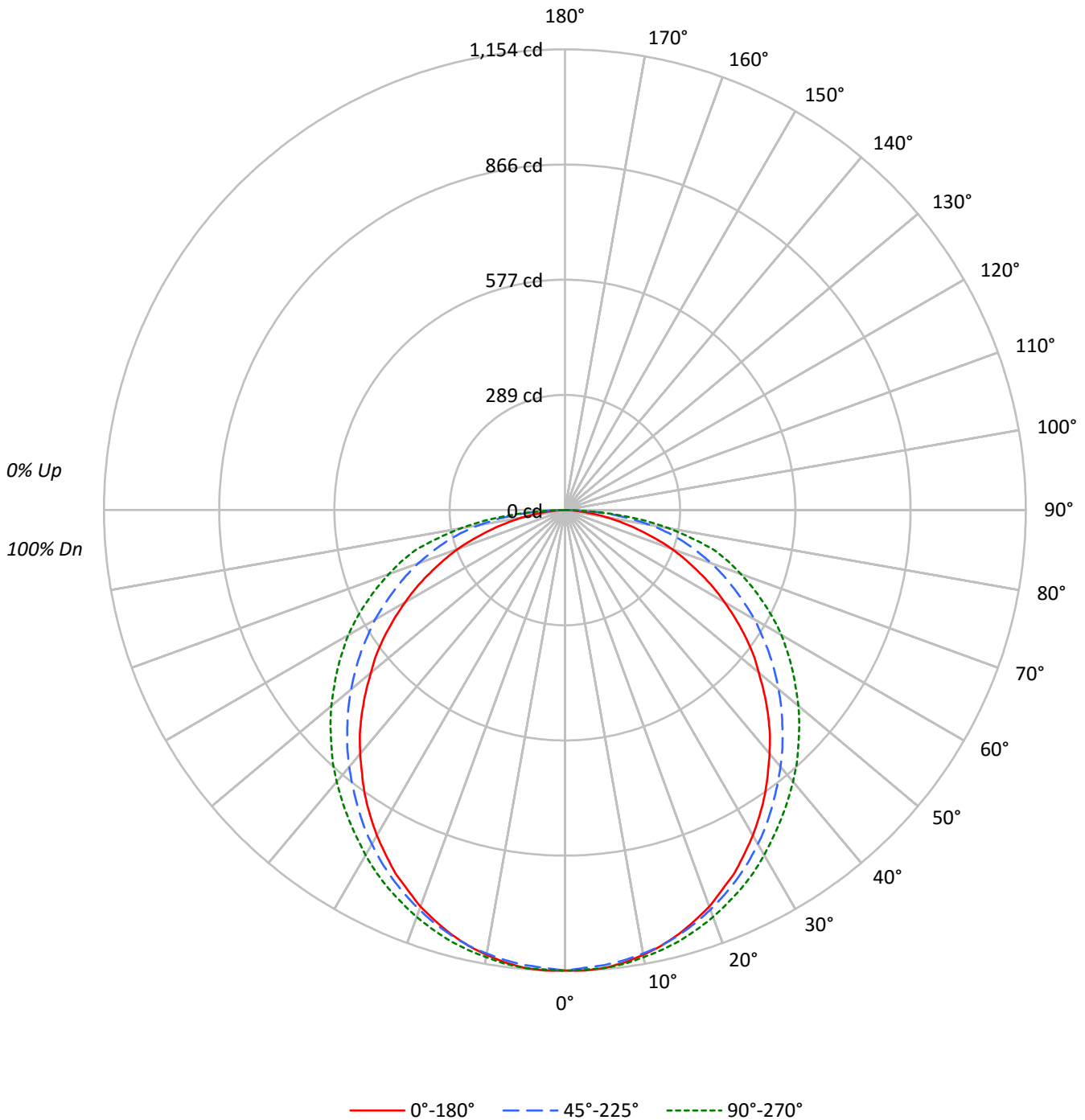
Input Watts (W): 32.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1552	1552	1552
5°	1555	1545	1555
10°	1545	1541	1553
15°	1532	1535	1555
20°	1513	1525	1553
25°	1490	1514	1552
30°	1462	1502	1550
35°	1433	1486	1551
40°	1400	1475	1561
45°	1367	1466	1574
50°	1326	1462	1598
55°	1293	1464	1630
60°	1243	1477	1686
65°	1186	1492	1747
70°	1123	1538	1844
75°	1001	1604	2014
80°	854	1699	2059
85°	608	1684	1970



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	109.1	3.1
10°-20°	312.1	8.9
20°-30°	471.4	13.5
30°-40°	568.1	16.2
40°-50°	596.4	17.1
50°-60°	558.0	16.0
60°-70°	460.8	13.2
70°-80°	314.0	9.0
80°-90°	107.1	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°	892.6	25.5
0°-40°	1460.7	41.8
0°-60°	2615.1	74.8
0°-90°	3497.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3497.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1153	1153	1153	1153	1153	
5°	1151	1150	1144	1151	1151	109
15°	1100	1101	1102	1114	1116	310
25°	1004	1008	1020	1040	1045	462
35°	872	882	905	935	944	545
45°	718	733	770	812	827	554
55°	551	573	624	675	695	492
65°	372	404	469	528	549	369
75°	193	237	309	367	388	205
85°	39	78	109	123	128	49
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1153.3	1153.3	1153.3	1153.3	1153.3
2.5°	1154.4	1153.3	1147.5	1153.3	1152.1
5°	1151.0	1149.8	1144.0	1151.0	1151.0
7.5°	1142.8	1142.8	1137.0	1145.2	1146.3
10°	1131.2	1131.2	1127.8	1137.0	1137.0
12.5°	1117.3	1117.3	1117.3	1126.6	1127.8
15°	1099.9	1101.1	1102.2	1113.8	1116.2
17.5°	1079.0	1081.3	1084.8	1098.7	1101.1
20°	1057.0	1059.3	1065.1	1081.3	1084.8
22.5°	1029.1	1034.9	1043.1	1061.6	1065.1
25°	1003.6	1008.2	1019.9	1039.6	1045.4
27.5°	972.3	979.2	994.3	1015.2	1023.3
30°	941.0	947.9	966.5	990.8	997.8
32.5°	907.3	917.8	937.5	963.0	971.1
35°	872.5	881.8	905.0	935.2	944.4
37.5°	834.2	847.0	872.5	905.0	916.6
40°	797.1	811.0	840.0	874.8	888.7
42.5°	760.0	773.9	806.4	845.8	859.7
45°	718.2	733.3	770.4	812.2	827.3
47.5°	676.4	695.0	735.6	779.7	795.9
50°	633.5	654.4	698.5	744.9	763.4
52.5°	595.2	614.9	661.3	711.2	728.6
55°	551.1	573.2	624.2	675.3	695.0
57.5°	505.9	530.2	584.8	640.5	660.2
60°	461.8	488.5	548.8	604.5	626.5
62.5°	418.8	445.5	508.2	566.2	588.2
65°	372.4	403.8	468.7	527.9	548.8
67.5°	328.3	362.0	430.4	488.5	509.3
70°	285.4	317.9	391.0	447.9	468.7
72.5°	239.0	276.1	349.2	408.4	430.4
75°	192.6	236.7	308.6	366.6	387.5
77.5°	149.7	194.9	266.9	314.4	324.9
80°	110.2	156.6	219.3	252.9	265.7
82.5°	70.8	117.2	167.1	191.4	201.9
85°	39.4	77.7	109.1	123.0	127.6
87.5°	16.2	33.6	44.1	49.9	49.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)