

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: P314300

Luminaire Tested: **24FCZ2-40-UNV-L83050-S-CP125-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: P314300
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-L83050-S-CP125-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB 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: 3591.0 lumens
Efficiency: N/A
Efficacy: 110.2 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

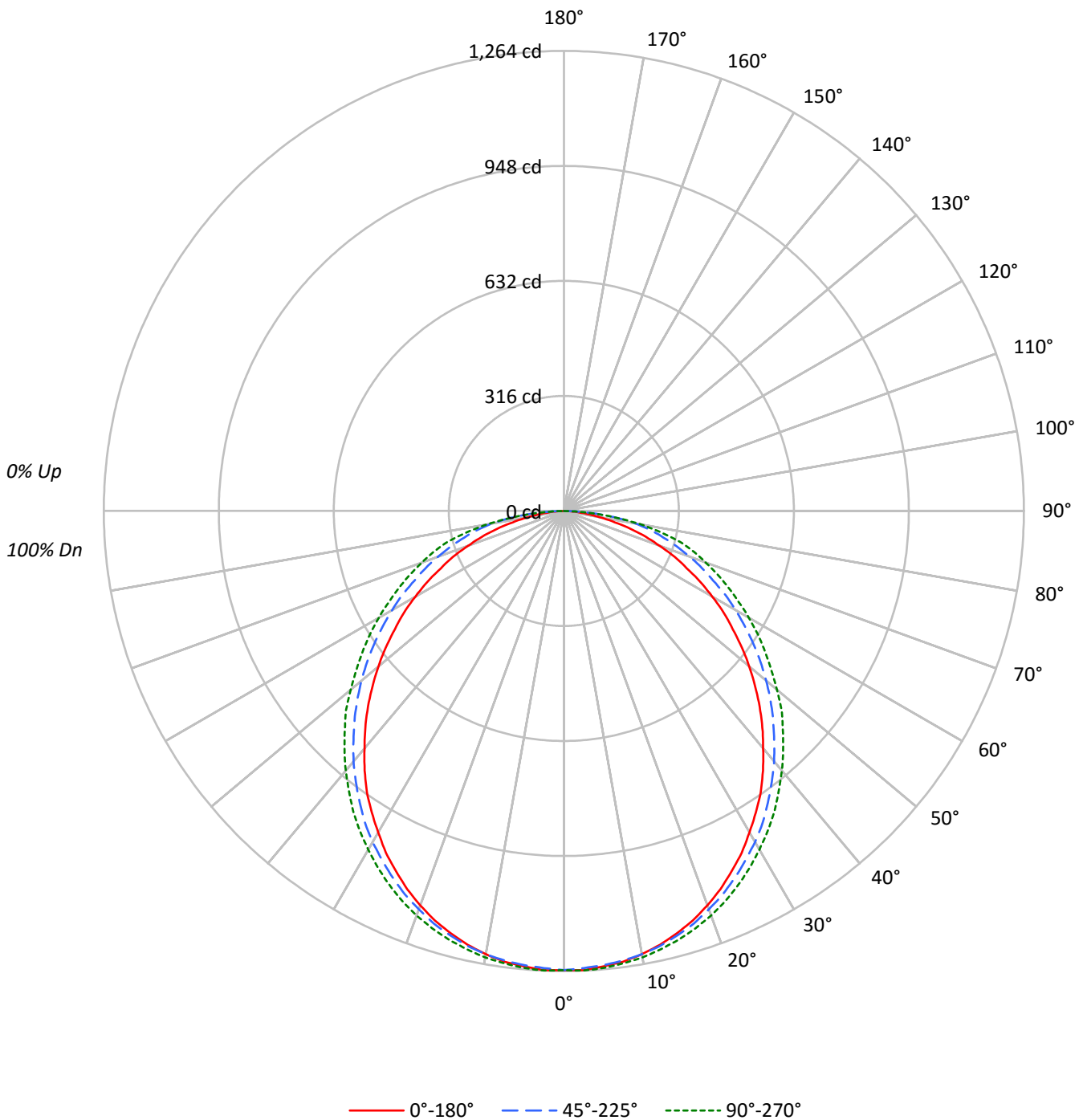
Input Watts (W): 32.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1697	1697	1697
5°	1696	1692	1702
10°	1689	1689	1702
15°	1673	1681	1698
20°	1651	1668	1694
25°	1621	1651	1683
30°	1584	1632	1669
35°	1549	1606	1656
40°	1497	1579	1637
45°	1448	1548	1619
50°	1392	1518	1600
55°	1330	1490	1584
60°	1268	1467	1581
65°	1188	1442	1591
70°	1100	1449	1633
75°	984	1476	1725
80°	796	1564	1688
85°	599	1374	1338



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	119.4	3.3
10°-20°	341.3	9.5
20°-30°	513.0	14.3
30°-40°	611.0	17.0
40°-50°	625.4	17.4
50°-60°	563.0	15.7
60°-70°	442.2	12.3
70°-80°	287.0	8.0
80°-90°	88.8	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°	973.7	27.1
0°-40°	1584.7	44.1
0°-60°	2773.1	77.2
0°-90°	3591.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3591.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1262	1262	1262	1262	1262	
5°	1256	1258	1252	1259	1260	119
15°	1201	1204	1207	1217	1219	339
25°	1092	1101	1112	1130	1134	503
35°	943	955	978	1002	1008	588
45°	761	779	813	844	851	587
55°	567	592	635	668	675	508
65°	373	402	453	490	500	371
75°	189	226	284	323	332	200
85°	39	72	89	87	87	47
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1261.5	1261.5	1261.5	1261.5	1261.5
2.5°	1262.7	1262.7	1257.0	1262.7	1263.8
5°	1255.8	1258.1	1252.4	1259.3	1260.4
7.5°	1249.0	1249.0	1245.6	1252.4	1253.6
10°	1236.4	1237.6	1236.4	1244.4	1245.6
12.5°	1220.5	1222.8	1223.9	1231.9	1233.0
15°	1201.1	1204.5	1206.8	1217.1	1219.3
17.5°	1179.4	1182.8	1188.5	1199.9	1202.2
20°	1153.2	1157.7	1164.6	1179.4	1182.8
22.5°	1124.7	1129.2	1140.6	1154.3	1160.0
25°	1091.6	1100.7	1112.1	1130.4	1133.8
27.5°	1058.5	1066.5	1081.3	1100.7	1105.3
30°	1019.7	1032.3	1050.5	1069.9	1074.5
32.5°	982.1	994.6	1016.3	1036.8	1042.5
35°	943.3	954.7	977.5	1001.5	1008.3
37.5°	898.8	913.6	938.7	962.7	969.5
40°	852.1	870.3	898.8	923.9	931.9
42.5°	807.6	827.0	855.5	882.9	892.0
45°	760.8	779.1	813.3	844.1	850.9
47.5°	712.9	733.4	769.9	800.7	812.1
50°	665.0	686.7	725.4	757.4	764.2
52.5°	617.1	639.9	681.0	715.2	718.6
55°	566.9	592.0	635.3	668.4	675.3
57.5°	521.3	542.9	589.7	623.9	631.9
60°	471.1	495.0	545.2	577.2	587.4
62.5°	423.2	448.3	500.7	532.7	541.8
65°	373.0	401.5	452.8	490.5	499.6
67.5°	329.6	357.0	411.8	448.3	457.4
70°	279.5	310.3	368.4	406.1	415.2
72.5°	236.1	268.0	326.2	362.7	376.4
75°	189.3	225.8	284.0	322.8	331.9
77.5°	143.7	185.9	245.2	274.9	274.9
80°	102.7	147.1	201.9	215.6	217.9
82.5°	67.3	110.6	149.4	148.3	148.3
85°	38.8	71.9	89.0	86.7	86.7
87.5°	14.8	29.7	31.9	31.9	30.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)