

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: P314297

Luminaire Tested: **24FCZ2-40-UNV-L83050-S-CA125-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: P314297
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-CA125-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" 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: 4069.0 lumens
Efficiency: N/A
Efficacy: 121.5 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

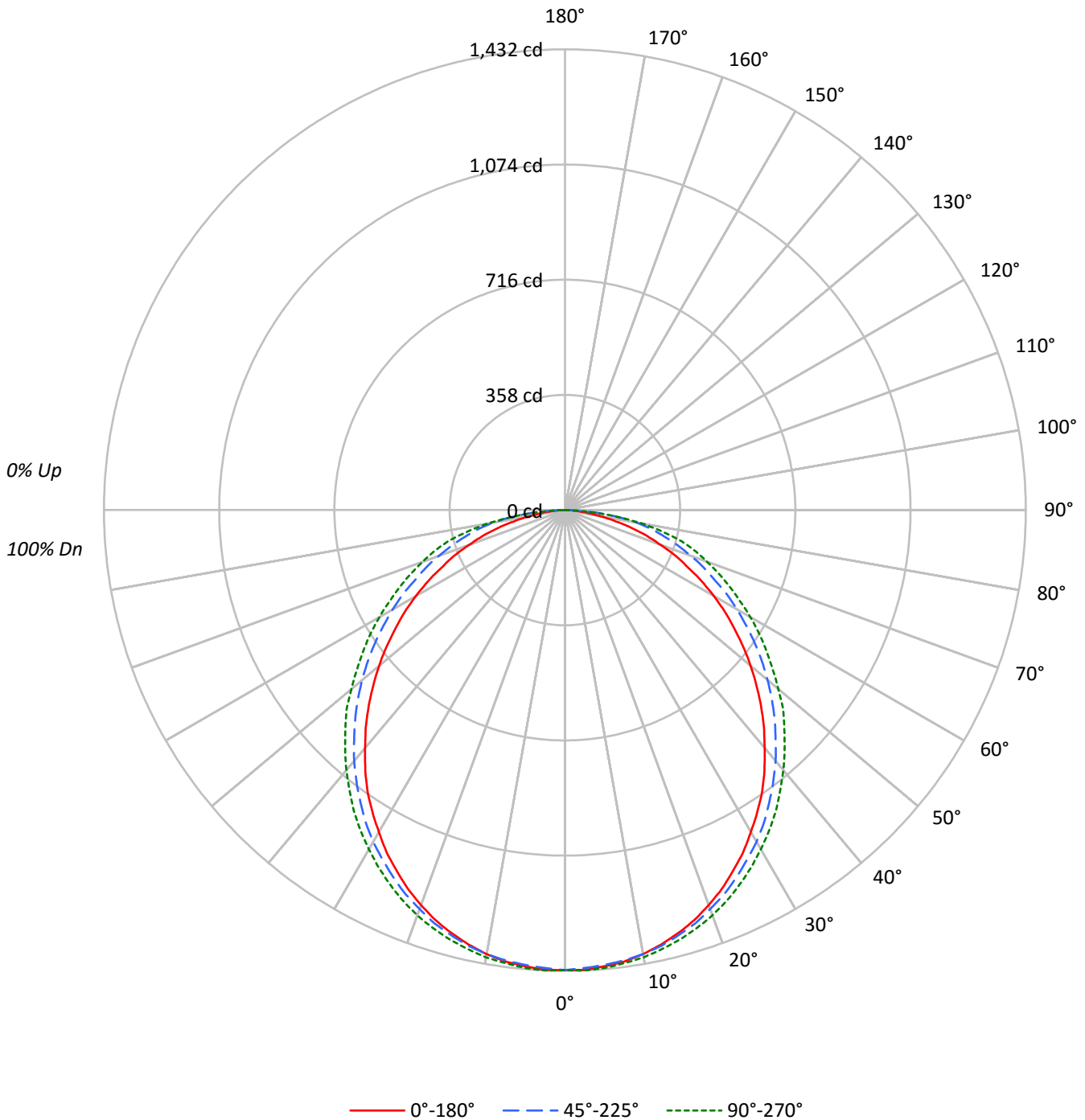
Input Watts (W): 33.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1923	1923	1923
5°	1922	1917	1929
10°	1914	1914	1928
15°	1896	1905	1925
20°	1871	1889	1919
25°	1836	1871	1907
30°	1795	1849	1892
35°	1756	1819	1877
40°	1696	1789	1855
45°	1640	1753	1835
50°	1577	1721	1813
55°	1507	1689	1795
60°	1436	1662	1791
65°	1345	1634	1802
70°	1246	1642	1851
75°	1115	1673	1955
80°	901	1773	1913
85°	678	1556	1516



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	135.3	3.3
10°-20°	386.7	9.5
20°-30°	581.3	14.3
30°-40°	692.4	17.0
40°-50°	708.6	17.4
50°-60°	638.0	15.7
60°-70°	501.0	12.3
70°-80°	325.2	8.0
80°-90°	100.6	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°	1103.3	27.1
0°-40°	1795.7	44.1
0°-60°	3142.3	77.2
0°-90°	4069.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4069.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1430	1430	1430	1430	1430	
5°	1423	1426	1419	1427	1428	135
15°	1361	1365	1367	1379	1382	384
25°	1237	1247	1260	1281	1285	570
35°	1069	1082	1108	1135	1142	667
45°	862	883	922	956	964	665
55°	642	671	720	757	765	576
65°	423	455	513	556	566	421
75°	214	256	322	366	376	227
85°	44	81	101	98	98	53
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1429.5	1429.5	1429.5	1429.5	1429.5
2.5°	1430.8	1430.8	1424.3	1430.8	1432.1
5°	1423.0	1425.6	1419.1	1426.9	1428.2
7.5°	1415.2	1415.2	1411.4	1419.1	1420.4
10°	1401.0	1402.3	1401.0	1410.1	1411.4
12.5°	1382.9	1385.5	1386.8	1395.9	1397.2
15°	1361.0	1364.8	1367.4	1379.1	1381.6
17.5°	1336.4	1340.3	1346.7	1359.7	1362.3
20°	1306.7	1311.9	1319.6	1336.4	1340.3
22.5°	1274.4	1279.5	1292.5	1308.0	1314.4
25°	1236.9	1247.2	1260.2	1280.8	1284.7
27.5°	1199.4	1208.5	1225.3	1247.2	1252.4
30°	1155.5	1169.7	1190.4	1212.3	1217.5
32.5°	1112.8	1127.0	1151.6	1174.9	1181.3
35°	1068.9	1081.8	1107.6	1134.8	1142.5
37.5°	1018.5	1035.3	1063.7	1090.8	1098.6
40°	965.5	986.2	1018.5	1046.9	1055.9
42.5°	915.1	937.0	969.3	1000.4	1010.7
45°	862.1	882.8	921.5	956.4	964.2
47.5°	807.8	831.1	872.4	907.3	920.2
50°	753.5	778.1	822.0	858.2	866.0
52.5°	699.2	725.1	771.6	810.4	814.3
55°	642.4	670.8	719.9	757.4	765.1
57.5°	590.7	615.2	668.2	707.0	716.0
60°	533.8	560.9	617.8	654.0	665.6
62.5°	479.5	507.9	567.4	603.6	613.9
65°	422.6	454.9	513.1	555.8	566.1
67.5°	373.5	404.5	466.6	507.9	518.3
70°	316.7	351.6	417.5	460.1	470.5
72.5°	267.5	303.7	369.6	411.0	426.5
75°	214.5	255.9	321.8	365.8	376.1
77.5°	162.9	210.7	277.9	311.5	311.5
80°	116.3	166.7	228.8	244.3	246.9
82.5°	76.3	125.4	169.3	168.0	168.0
85°	43.9	81.4	100.8	98.2	98.2
87.5°	16.8	33.6	36.2	36.2	34.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)