

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: P314271

Luminaire Tested: **24FCZ2-40HE-UNV-L83050-S-CA125-W2A-U-3500K**

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: P314271
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: 24FCZ2-40HE-UNV-L83050-S-CA125-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" ACRYLIC SHEET
Light Source: (336) 3500K 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: 3899.0 lumens
Efficiency: N/A
Efficacy: 128.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.27 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

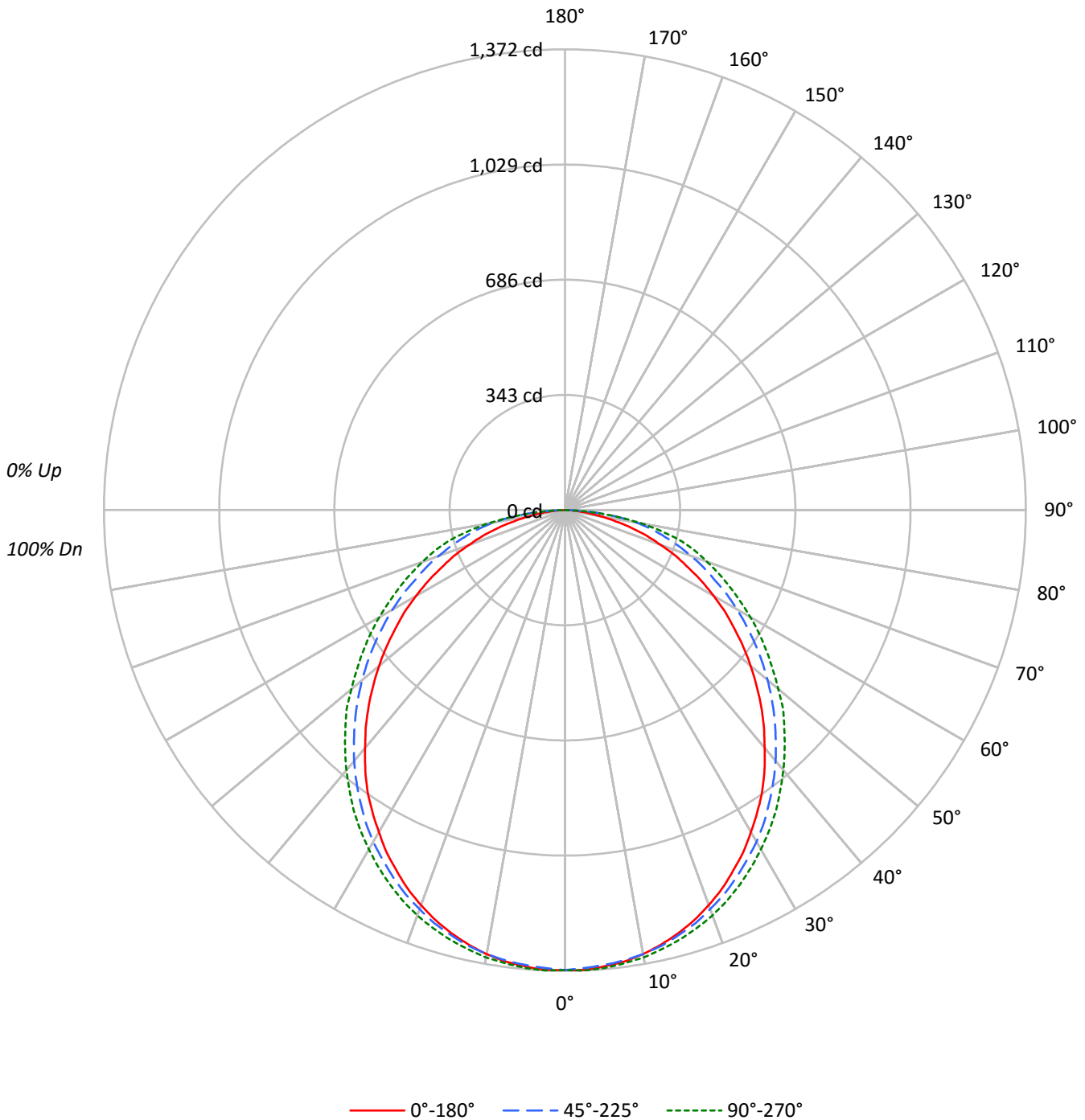
Input Watts (W): 30.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1843	1843	1843
5°	1842	1837	1848
10°	1834	1834	1848
15°	1817	1825	1844
20°	1793	1811	1839
25°	1760	1793	1828
30°	1720	1772	1812
35°	1682	1743	1798
40°	1625	1714	1777
45°	1572	1680	1758
50°	1511	1649	1737
55°	1444	1618	1720
60°	1376	1593	1716
65°	1289	1565	1727
70°	1194	1574	1773
75°	1069	1603	1874
80°	864	1698	1832
85°	650	1491	1453



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	129.7	3.3
10°-20°	370.5	9.5
20°-30°	557.0	14.3
30°-40°	663.5	17.0
40°-50°	679.0	17.4
50°-60°	611.3	15.7
60°-70°	480.1	12.3
70°-80°	311.6	8.0
80°-90°	96.4	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°	1057.2	27.1
0°-40°	1720.6	44.1
0°-60°	3011.0	77.2
0°-90°	3899.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3899.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1370	1370	1370	1370	1370	
5°	1364	1366	1360	1367	1368	130
15°	1304	1308	1310	1321	1324	368
25°	1185	1195	1208	1227	1231	546
35°	1024	1037	1061	1087	1095	639
45°	826	846	883	916	924	637
55°	616	643	690	726	733	552
65°	405	436	492	532	542	403
75°	206	245	308	350	360	218
85°	42	78	97	94	94	51
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1369.7	1369.7	1369.7	1369.7	1369.7
2.5°	1371.0	1371.0	1364.8	1371.0	1372.2
5°	1363.6	1366.0	1359.8	1367.3	1368.5
7.5°	1356.1	1356.1	1352.4	1359.8	1361.1
10°	1342.5	1343.7	1342.5	1351.2	1352.4
12.5°	1325.2	1327.6	1328.9	1337.5	1338.8
15°	1304.1	1307.8	1310.3	1321.4	1323.9
17.5°	1280.6	1284.3	1290.5	1302.9	1305.3
20°	1252.1	1257.0	1264.5	1280.6	1284.3
22.5°	1221.1	1226.1	1238.5	1253.3	1259.5
25°	1185.2	1195.1	1207.5	1227.3	1231.0
27.5°	1149.3	1158.0	1174.1	1195.1	1200.1
30°	1107.2	1120.8	1140.6	1161.7	1166.6
32.5°	1066.3	1079.9	1103.5	1125.8	1132.0
35°	1024.2	1036.6	1061.4	1087.4	1094.8
37.5°	975.9	992.0	1019.3	1045.3	1052.7
40°	925.1	945.0	975.9	1003.2	1011.8
42.5°	876.8	897.9	928.9	958.6	968.5
45°	826.1	845.9	883.0	916.5	923.9
47.5°	774.0	796.3	836.0	869.4	881.8
50°	722.0	745.6	787.7	822.3	829.8
52.5°	670.0	694.8	739.4	776.5	780.2
55°	615.5	642.8	689.8	725.7	733.2
57.5°	566.0	589.5	640.3	677.4	686.1
60°	511.5	537.5	592.0	626.7	637.8
62.5°	459.5	486.7	543.7	578.4	588.3
65°	405.0	435.9	491.7	532.5	542.4
67.5°	357.9	387.6	447.1	486.7	496.6
70°	303.4	336.9	400.0	440.9	450.8
72.5°	256.4	291.0	354.2	393.8	408.7
75°	205.6	245.2	308.4	350.5	360.4
77.5°	156.0	201.9	266.3	298.5	298.5
80°	111.5	159.8	219.2	234.1	236.5
82.5°	73.1	120.1	162.2	161.0	161.0
85°	42.1	78.0	96.6	94.1	94.1
87.5°	16.1	32.2	34.7	34.7	33.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)