

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: P314266

Luminaire Tested: **24FCZ2-40HE-UNV-L83050-S-CA08-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: P314266
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-CA08-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.08" 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: 3913.0 lumens
Efficiency: N/A
Efficacy: 128.7 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

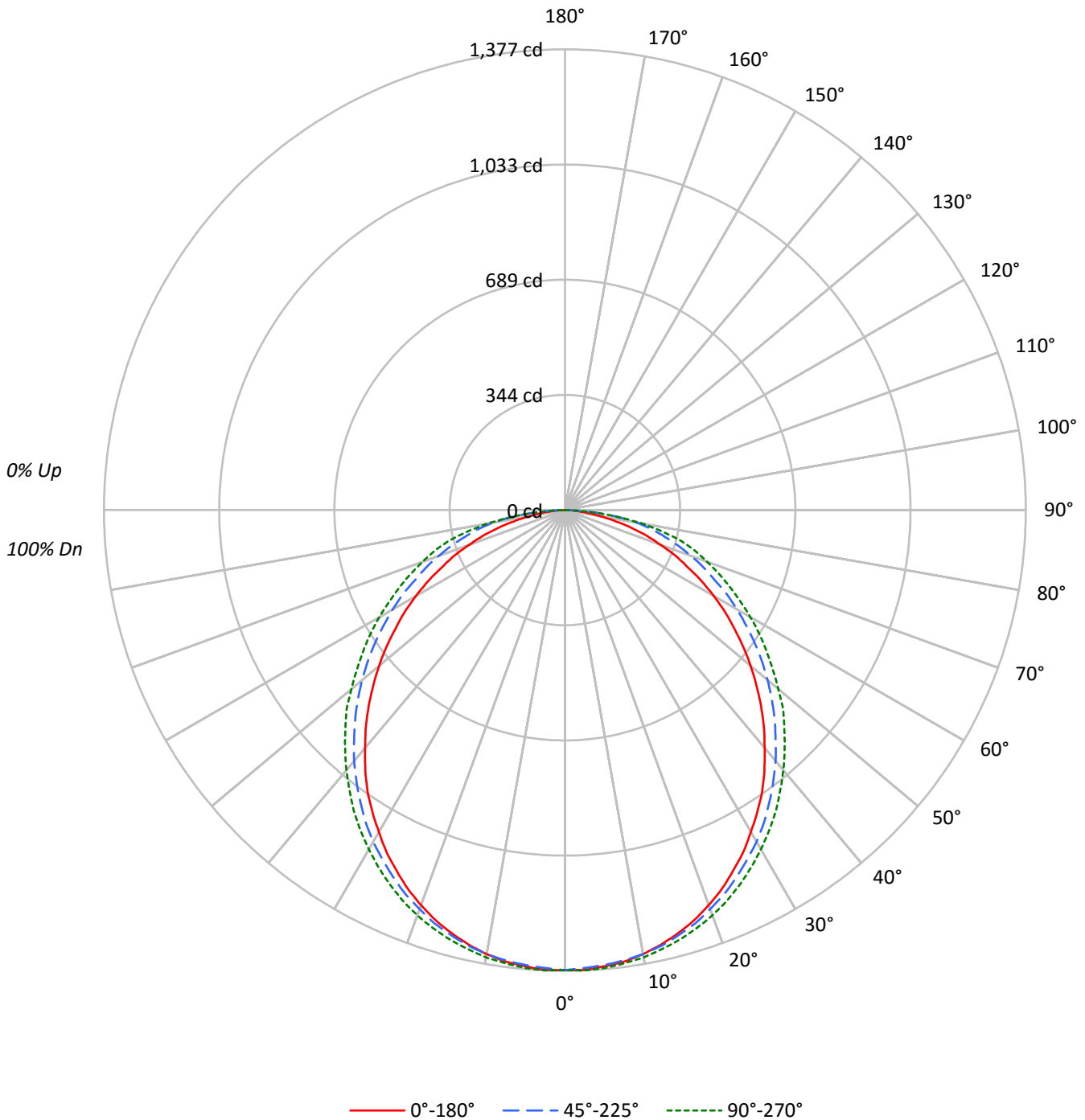
Input Watts (W): 30.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1850	1850	1850
5°	1848	1843	1855
10°	1841	1841	1854
15°	1823	1832	1851
20°	1799	1817	1845
25°	1766	1799	1834
30°	1726	1778	1819
35°	1688	1750	1805
40°	1631	1720	1784
45°	1577	1686	1764
50°	1517	1655	1743
55°	1449	1624	1726
60°	1381	1599	1722
65°	1294	1571	1733
70°	1198	1579	1780
75°	1072	1609	1880
80°	867	1705	1839
85°	653	1496	1459



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	130.1	3.3
10°-20°	371.9	9.5
20°-30°	559.0	14.3
30°-40°	665.8	17.0
40°-50°	681.5	17.4
50°-60°	613.5	15.7
60°-70°	481.8	12.3
70°-80°	312.7	8.0
80°-90°	96.7	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°	1061.0	27.1
0°-40°	1726.8	44.1
0°-60°	3021.8	77.2
0°-90°	3913.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3913.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1375	1375	1375	1375	1375	
5°	1368	1371	1365	1372	1373	130
15°	1309	1312	1315	1326	1329	369
25°	1190	1199	1212	1232	1236	548
35°	1028	1040	1065	1091	1099	641
45°	829	849	886	920	927	639
55°	618	645	692	728	736	554
65°	406	438	493	534	544	405
75°	206	246	310	352	362	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°	1374.7	1374.7	1374.7	1374.7	1374.7
2.5°	1375.9	1375.9	1369.7	1375.9	1377.1
5°	1368.4	1370.9	1364.7	1372.2	1373.4
7.5°	1361.0	1361.0	1357.3	1364.7	1366.0
10°	1347.3	1348.6	1347.3	1356.0	1357.3
12.5°	1329.9	1332.4	1333.6	1342.3	1343.6
15°	1308.8	1312.5	1315.0	1326.2	1328.7
17.5°	1285.2	1288.9	1295.1	1307.5	1310.0
20°	1256.6	1261.6	1269.0	1285.2	1288.9
22.5°	1225.5	1230.5	1242.9	1257.8	1264.0
25°	1189.5	1199.4	1211.8	1231.7	1235.5
27.5°	1153.4	1162.1	1178.3	1199.4	1204.4
30°	1111.2	1124.8	1144.7	1165.9	1170.8
32.5°	1070.1	1083.8	1107.4	1129.8	1136.0
35°	1027.9	1040.3	1065.2	1091.3	1098.7
37.5°	979.4	995.6	1022.9	1049.0	1056.5
40°	928.5	948.3	979.4	1006.8	1015.5
42.5°	880.0	901.1	932.2	962.0	972.0
45°	829.0	848.9	886.2	919.8	927.2
47.5°	776.8	799.2	839.0	872.5	885.0
50°	724.6	748.2	790.5	825.3	832.8
52.5°	672.4	697.3	742.0	779.3	783.0
55°	617.7	645.1	692.3	728.3	735.8
57.5°	568.0	591.6	642.6	679.9	688.6
60°	513.3	539.4	594.1	628.9	640.1
62.5°	461.1	488.5	545.6	580.4	590.4
65°	406.4	437.5	493.4	534.5	544.4
67.5°	359.2	389.0	448.7	488.5	498.4
70°	304.5	338.1	401.5	442.5	452.4
72.5°	257.3	292.1	355.5	395.2	410.2
75°	206.3	246.1	309.5	351.7	361.7
77.5°	156.6	202.6	267.2	299.5	299.5
80°	111.9	160.3	220.0	234.9	237.4
82.5°	73.3	120.6	162.8	161.6	161.6
85°	42.3	78.3	96.9	94.5	94.5
87.5°	16.2	32.3	34.8	34.8	33.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)