

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: P314265

Luminaire Tested: **24FCZ2-40HE-UNV-L83050-S-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: P314265
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-3000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.08" ACRYLIC SHEET
Light Source: (336) 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

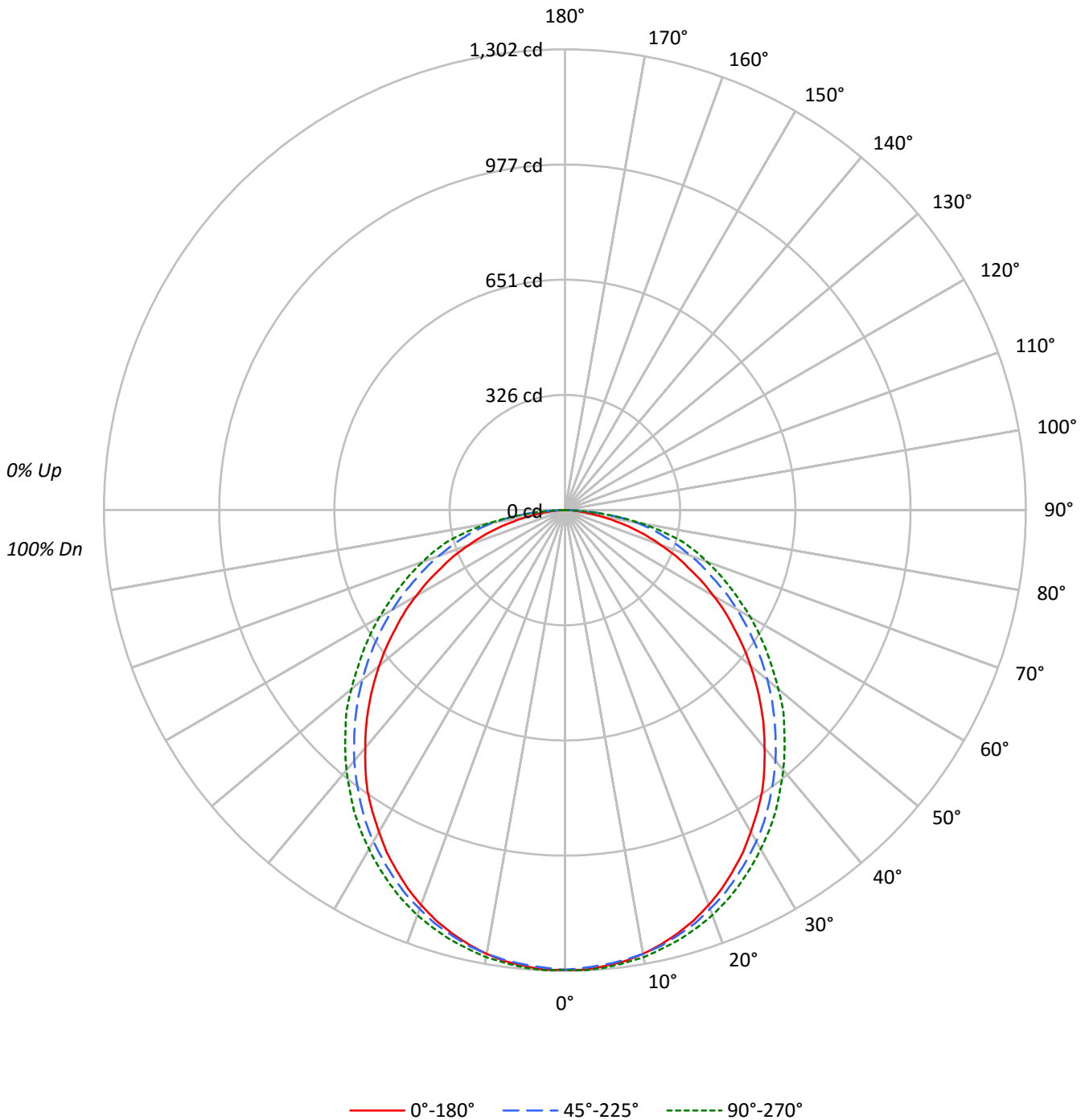
Lumens per Lamp: N/A
Luminaire Lumens: 3698.0 lumens
Efficiency: N/A
Efficacy: 122.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 30.3
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



TEST NUMBER: P314265
CATALOG NUMBER: 24FCZ2-40HE-UNV-L83050-S-CA08-W2A-U-3000K

Luminous Intensity Polar Plot





TEST NUMBER: P314265

CATALOG NUMBER: 24FCZ2-40HE-UNV-L83050-S-CA08-W2A-U-3000K

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°	1748	1748	1748
5°	1747	1742	1753
10°	1740	1740	1752
15°	1723	1731	1749
20°	1700	1717	1744
25°	1669	1700	1733
30°	1631	1681	1719
35°	1596	1654	1706
40°	1541	1626	1686
45°	1491	1594	1667
50°	1433	1564	1647
55°	1369	1535	1631
60°	1305	1511	1628
65°	1223	1485	1638
70°	1132	1493	1682
75°	1014	1521	1777
80°	819	1611	1739
85°	616	1414	1379



TEST NUMBER: P314265

CATALOG NUMBER: 24FCZ2-40HE-UNV-L83050-S-CA08-W2A-U-3000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	123.0	3.3
10°-20°	351.4	9.5
20°-30°	528.3	14.3
30°-40°	629.3	17.0
40°-50°	644.0	17.4
50°-60°	579.8	15.7
60°-70°	455.3	12.3
70°-80°	295.5	8.0
80°-90°	91.4	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°	1002.7	27.1
0°-40°	1631.9	44.1
0°-60°	2855.8	77.2
0°-90°	3698.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3698.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1299	1299	1299	1299	1299	
5°	1293	1296	1290	1297	1298	123
15°	1237	1240	1243	1253	1256	349
25°	1124	1134	1145	1164	1168	518
35°	971	983	1007	1031	1038	606
45°	784	802	838	869	876	604
55°	584	610	654	688	695	523
65°	384	414	466	505	514	382
75°	195	233	292	332	342	206
85°	40	74	92	89	89	48
90°	0	0	0	0	0	



TEST NUMBER: P314265

CATALOG NUMBER: 24FCZ2-40HE-UNV-L83050-S-CA08-W2A-U-3000K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1299.1	1299.1	1299.1	1299.1	1299.1
2.5°	1300.3	1300.3	1294.4	1300.3	1301.5
5°	1293.3	1295.6	1289.7	1296.8	1298.0
7.5°	1286.2	1286.2	1282.7	1289.7	1290.9
10°	1273.3	1274.5	1273.3	1281.5	1282.7
12.5°	1256.8	1259.2	1260.4	1268.6	1269.8
15°	1236.9	1240.4	1242.7	1253.3	1255.7
17.5°	1214.6	1218.1	1224.0	1235.7	1238.1
20°	1187.5	1192.2	1199.3	1214.6	1218.1
22.5°	1158.2	1162.9	1174.6	1188.7	1194.6
25°	1124.1	1133.5	1145.3	1164.1	1167.6
27.5°	1090.0	1098.3	1113.5	1133.5	1138.2
30°	1050.1	1063.0	1081.8	1101.8	1106.5
32.5°	1011.3	1024.3	1046.6	1067.7	1073.6
35°	971.4	983.2	1006.7	1031.3	1038.4
37.5°	925.6	940.9	966.7	991.4	998.4
40°	877.4	896.2	925.6	951.4	959.7
42.5°	831.6	851.6	881.0	909.2	918.6
45°	783.5	802.3	837.5	869.2	876.3
47.5°	734.1	755.3	792.9	824.6	836.3
50°	684.8	707.1	747.1	779.9	787.0
52.5°	635.5	659.0	701.2	736.5	740.0
55°	583.8	609.6	654.3	688.3	695.4
57.5°	536.8	559.1	607.3	642.5	650.7
60°	485.1	509.8	561.5	594.4	604.9
62.5°	435.8	461.6	515.7	548.5	557.9
65°	384.1	413.5	466.3	505.1	514.5
67.5°	339.5	367.7	424.0	461.6	471.0
70°	287.8	319.5	379.4	418.2	427.6
72.5°	243.1	276.0	335.9	373.5	387.6
75°	195.0	232.6	292.5	332.4	341.8
77.5°	148.0	191.5	252.5	283.1	283.1
80°	105.7	151.5	207.9	222.0	224.4
82.5°	69.3	113.9	153.9	152.7	152.7
85°	39.9	74.0	91.6	89.3	89.3
87.5°	15.3	30.5	32.9	32.9	31.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)