

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: P314275

Luminaire Tested: **24FCZ2-40HE-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: P314275  
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-CP125-W2A-U-3000K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB 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

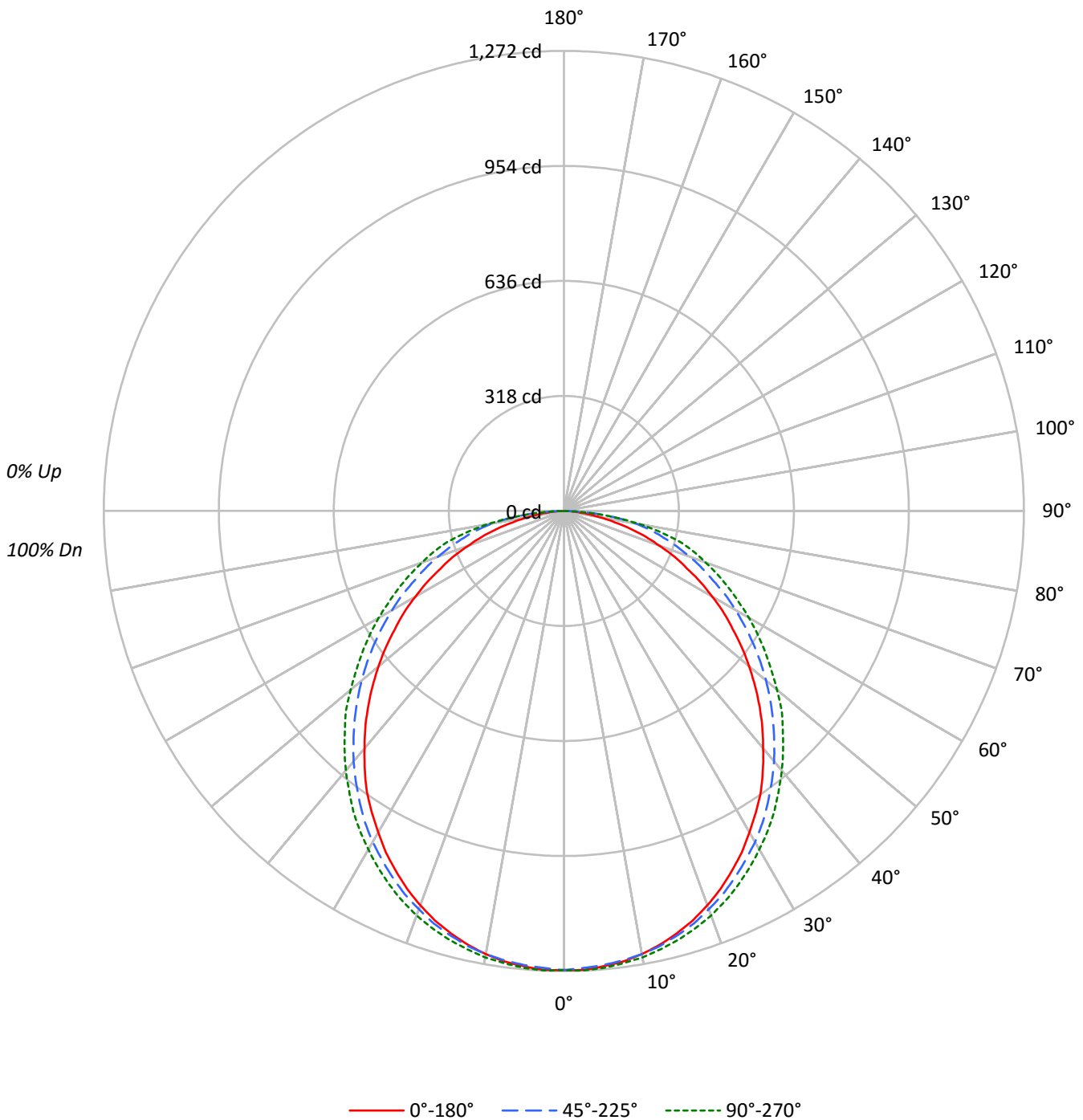
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3613.0 lumens  
Efficiency: N/A  
Efficacy: 119.2 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): 30.3  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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: P314275  
CATALOG NUMBER: 24FCZ2-40HE-UNV-L83050-S-CP125-W2A-U-3000K

### Luminous Intensity Polar Plot





TEST NUMBER: P314275

CATALOG NUMBER: 24FCZ2-40HE-UNV-L83050-S-CP125-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°	1708	1708	1708
5°	1707	1702	1713
10°	1700	1700	1712
15°	1683	1691	1709
20°	1661	1678	1704
25°	1631	1661	1693
30°	1594	1642	1680
35°	1559	1615	1666
40°	1506	1588	1647
45°	1457	1557	1629
50°	1401	1528	1609
55°	1338	1499	1594
60°	1276	1476	1590
65°	1195	1450	1600
70°	1106	1458	1643
75°	990	1486	1736
80°	800	1574	1698
85°	602	1382	1346



TEST NUMBER: P314275

CATALOG NUMBER: 24FCZ2-40HE-UNV-L83050-S-CP125-W2A-U-3000K

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	120.2	3.3
10°-20°	343.3	9.5
20°-30°	516.1	14.3
30°-40°	614.8	17.0
40°-50°	629.2	17.4
50°-60°	566.5	15.7
60°-70°	444.9	12.3
70°-80°	288.7	8.0
80°-90°	89.3	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°	979.6	27.1
0°-40°	1594.4	44.1
0°-60°	2790.1	77.2
0°-90°	3613.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3613.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1269	1269	1269	1269	1269	
5°	1264	1266	1260	1267	1268	120
15°	1208	1212	1214	1224	1227	341
25°	1098	1108	1119	1137	1141	506
35°	949	961	984	1008	1014	592
45°	766	784	818	849	856	590
55°	570	596	639	672	679	511
65°	375	404	456	494	503	374
75°	190	227	286	325	334	202
85°	39	72	90	87	87	47
90°	0	0	0	0	0	



TEST NUMBER: P314275

CATALOG NUMBER: 24FCZ2-40HE-UNV-L83050-S-CP125-W2A-U-3000K

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1269.3	1269.3	1269.3	1269.3	1269.3
2.5°	1270.4	1270.4	1264.7	1270.4	1271.6
5°	1263.5	1265.8	1260.1	1267.0	1268.1
7.5°	1256.6	1256.6	1253.2	1260.1	1261.2
10°	1244.0	1245.2	1244.0	1252.1	1253.2
12.5°	1228.0	1230.3	1231.4	1239.4	1240.6
15°	1208.4	1211.9	1214.2	1224.5	1226.8
17.5°	1186.6	1190.1	1195.8	1207.3	1209.6
20°	1160.2	1164.8	1171.7	1186.6	1190.1
22.5°	1131.6	1136.1	1147.6	1161.4	1167.1
25°	1098.3	1107.5	1118.9	1137.3	1140.7
27.5°	1065.0	1073.0	1087.9	1107.5	1112.0
30°	1026.0	1038.6	1057.0	1076.5	1081.1
32.5°	988.1	1000.7	1022.5	1043.2	1048.9
35°	949.1	960.6	983.5	1007.6	1014.5
37.5°	904.3	919.2	944.5	968.6	975.5
40°	857.3	875.6	904.3	929.6	937.6
42.5°	812.5	832.0	860.7	888.3	897.4
45°	765.5	783.8	818.3	849.2	856.1
47.5°	717.3	737.9	774.6	805.6	817.1
50°	669.1	690.9	729.9	762.0	768.9
52.5°	620.9	643.8	685.1	719.6	723.0
55°	570.4	595.6	639.2	672.5	679.4
57.5°	524.5	546.3	593.3	627.7	635.8
60°	474.0	498.1	548.6	580.7	591.0
62.5°	425.8	451.0	503.8	535.9	545.1
65°	375.3	404.0	455.6	493.5	502.7
67.5°	331.7	359.2	414.3	451.0	460.2
70°	281.2	312.2	370.7	408.6	417.7
72.5°	237.6	269.7	328.2	364.9	378.7
75°	190.5	227.2	285.8	324.8	334.0
77.5°	144.6	187.1	246.7	276.6	276.6
80°	103.3	148.0	203.1	216.9	219.2
82.5°	67.7	111.3	150.3	149.2	149.2
85°	39.0	72.3	89.5	87.2	87.2
87.5°	14.9	29.8	32.1	32.1	31.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)