

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: P314432

Luminaire Tested: **24FCZ2-55HE-UNV-L83050-S-CP187-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: P314432  
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: 24FCZ2-55HE-UNV-L83050-S-CP187-W2A-U-4000K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.187" POLYCARB SHEET  
Light Source: (336) 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**

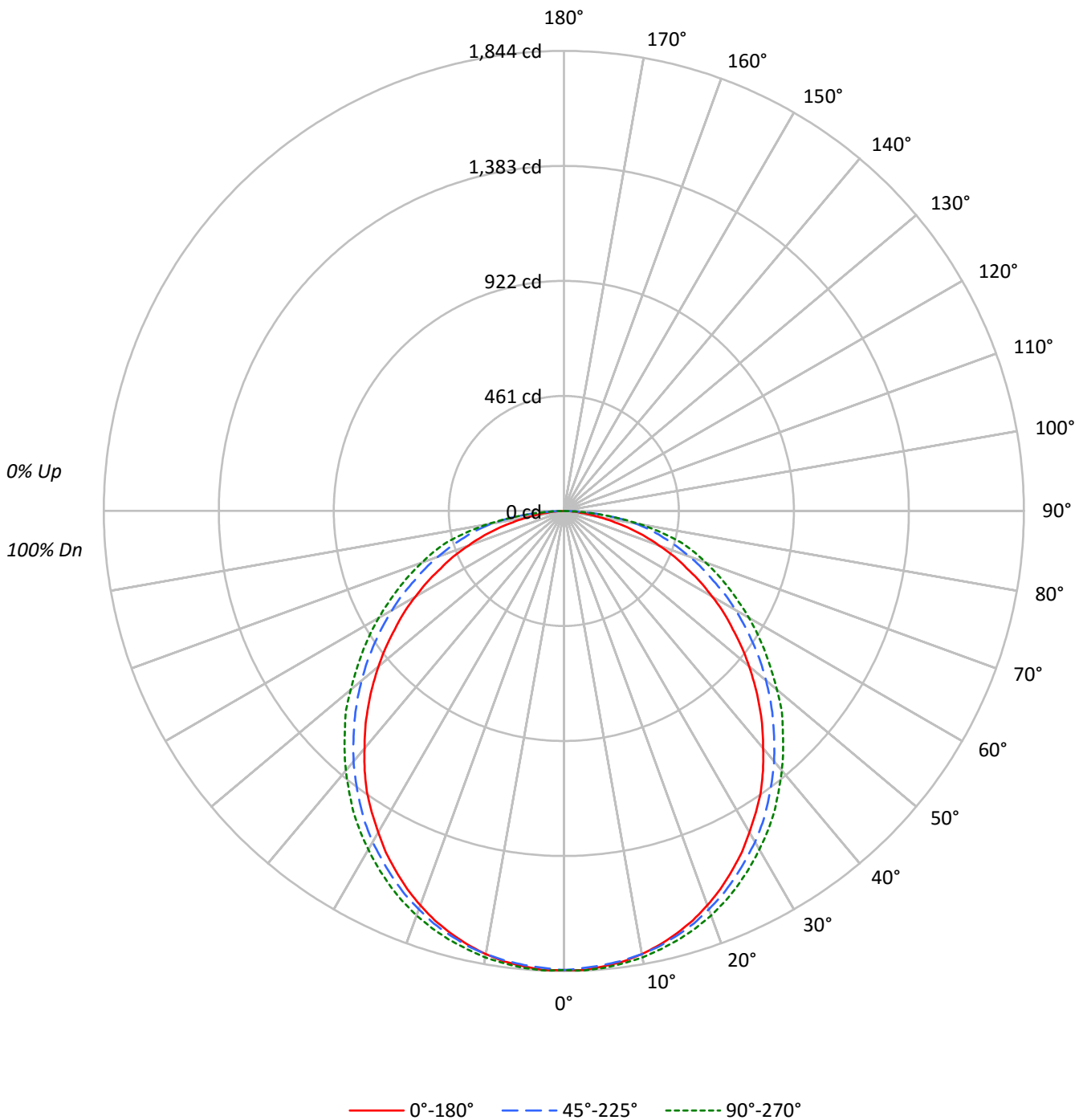
Lumens per Lamp: N/A  
Luminaire Lumens: 5238.0 lumens  
Efficiency: N/A  
Efficacy: 118.8 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 44.1  
Input Voltage (V): NR  
Input Current (A<sub>in</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: P314432

CATALOG NUMBER: 24FCZ2-55HE-UNV-L83050-S-CP187-W2A-U-4000K

### Luminous Intensity Polar Plot





TEST NUMBER: P314432

CATALOG NUMBER: 24FCZ2-55HE-UNV-L83050-S-CP187-W2A-U-4000K

**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°	2476	2476	2476
5°	2474	2467	2483
10°	2464	2464	2482
15°	2440	2452	2478
20°	2408	2432	2470
25°	2364	2408	2455
30°	2311	2381	2435
35°	2260	2342	2416
40°	2183	2303	2387
45°	2112	2257	2362
50°	2030	2215	2333
55°	1940	2174	2311
60°	1849	2140	2306
65°	1732	2103	2320
70°	1603	2114	2382
75°	1436	2154	2517
80°	1160	2282	2462
85°	874	2004	1951



TEST NUMBER: P314432

CATALOG NUMBER: 24FCZ2-55HE-UNV-L83050-S-CP187-W2A-U-4000K

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	174.2	3.3
10°-20°	497.8	9.5
20°-30°	748.3	14.3
30°-40°	891.3	17.0
40°-50°	912.2	17.4
50°-60°	821.3	15.7
60°-70°	645.0	12.3
70°-80°	418.6	8.0
80°-90°	129.5	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°	1420.2	27.1
0°-40°	2311.5	44.1
0°-60°	4045.0	77.2
0°-90°	5238.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5238.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1840	1840	1840	1840	1840	
5°	1832	1835	1827	1837	1838	174
15°	1752	1757	1760	1775	1779	494
25°	1592	1606	1622	1649	1654	733
35°	1376	1393	1426	1461	1471	858
45°	1110	1136	1186	1231	1241	856
55°	827	864	927	975	985	741
65°	544	586	660	715	729	542
75°	276	329	414	471	484	292
85°	57	105	130	126	126	68
90°	0	0	0	0	0	



TEST NUMBER: P314432

CATALOG NUMBER: 24FCZ2-55HE-UNV-L83050-S-CP187-W2A-U-4000K

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1840.1	1840.1	1840.1	1840.1	1840.1
2.5°	1841.8	1841.8	1833.5	1841.8	1843.5
5°	1831.8	1835.2	1826.8	1836.8	1838.5
7.5°	1821.8	1821.8	1816.9	1826.8	1828.5
10°	1803.5	1805.2	1803.5	1815.2	1816.9
12.5°	1780.2	1783.6	1785.2	1796.9	1798.5
15°	1752.0	1757.0	1760.3	1775.3	1778.6
17.5°	1720.4	1725.3	1733.7	1750.3	1753.6
20°	1682.1	1688.7	1698.7	1720.4	1725.3
22.5°	1640.5	1647.1	1663.8	1683.7	1692.1
25°	1592.2	1605.6	1622.2	1648.8	1653.8
27.5°	1544.0	1555.6	1577.3	1605.6	1612.2
30°	1487.4	1505.7	1532.3	1560.6	1567.3
32.5°	1432.5	1450.8	1482.4	1512.4	1520.7
35°	1375.9	1392.6	1425.9	1460.8	1470.8
37.5°	1311.1	1332.7	1369.3	1404.2	1414.2
40°	1242.8	1269.5	1311.1	1347.7	1359.3
42.5°	1178.0	1206.2	1247.8	1287.8	1301.1
45°	1109.7	1136.4	1186.3	1231.2	1241.2
47.5°	1039.9	1069.8	1123.1	1168.0	1184.6
50°	970.0	1001.6	1058.2	1104.8	1114.7
52.5°	900.1	933.4	993.3	1043.2	1048.2
55°	826.9	863.5	926.7	975.0	985.0
57.5°	760.3	792.0	860.2	910.1	921.7
60°	687.1	722.1	795.3	841.9	856.8
62.5°	617.3	653.9	730.4	777.0	790.3
65°	544.1	585.7	660.5	715.4	728.7
67.5°	480.8	520.8	600.6	653.9	667.2
70°	407.6	452.5	537.4	592.3	605.6
72.5°	344.4	391.0	475.8	529.1	549.0
75°	276.2	329.4	414.3	470.9	484.2
77.5°	209.6	271.2	357.7	401.0	401.0
80°	149.7	214.6	294.5	314.5	317.8
82.5°	98.2	161.4	218.0	216.3	216.3
85°	56.6	104.8	129.8	126.4	126.4
87.5°	21.6	43.3	46.6	46.6	44.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)