

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: P314431

Luminaire Tested: **24FCZ2-55HE-UNV-L83050-S-CP187-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: P314431  
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-3500K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.187" POLYCARB 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**

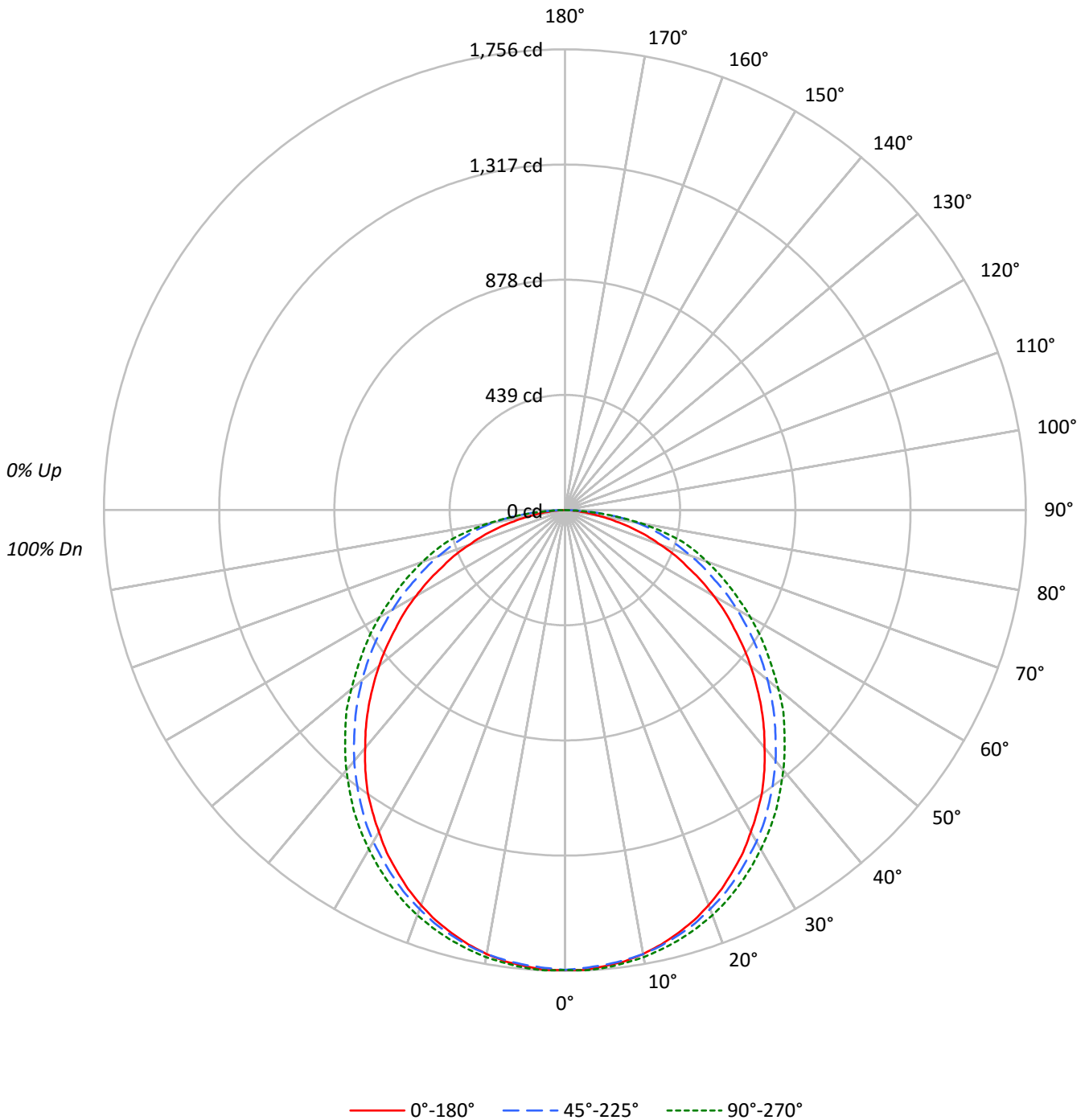
Lumens per Lamp: N/A  
Luminaire Lumens: 4989.0 lumens  
Efficiency: N/A  
Efficacy: 115.8 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 43.1  
Input Voltage (V): NR  
Input Current (A<sub>in</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



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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°	2358	2358	2358
5°	2356	2350	2365
10°	2347	2347	2364
15°	2324	2335	2360
20°	2294	2317	2353
25°	2251	2294	2339
30°	2201	2268	2319
35°	2153	2231	2301
40°	2079	2193	2274
45°	2011	2150	2250
50°	1934	2110	2222
55°	1848	2071	2201
60°	1761	2038	2196
65°	1650	2003	2210
70°	1527	2014	2269
75°	1368	2051	2397
80°	1105	2173	2345
85°	832	1908	1859



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	165.9	3.3
10°-20°	474.1	9.5
20°-30°	712.7	14.3
30°-40°	848.9	17.0
40°-50°	868.9	17.4
50°-60°	782.2	15.7
60°-70°	614.3	12.3
70°-80°	398.7	8.0
80°-90°	123.3	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°	1352.7	27.1
0°-40°	2201.7	44.1
0°-60°	3852.7	77.2
0°-90°	4989.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4989.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1753	1753	1753	1753	1753	
5°	1745	1748	1740	1750	1751	166
15°	1669	1673	1677	1691	1694	471
25°	1516	1529	1545	1570	1575	699
35°	1310	1326	1358	1391	1401	818
45°	1057	1082	1130	1173	1182	815
55°	788	822	883	929	938	706
65°	518	558	629	681	694	516
75°	263	314	395	448	461	278
85°	54	100	124	120	120	65
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1752.7	1752.7	1752.7	1752.7	1752.7
2.5°	1754.3	1754.3	1746.3	1754.3	1755.8
5°	1744.7	1747.9	1740.0	1749.5	1751.1
7.5°	1735.2	1735.2	1730.5	1740.0	1741.6
10°	1717.8	1719.4	1717.8	1728.9	1730.5
12.5°	1695.6	1698.8	1700.4	1711.5	1713.1
15°	1668.7	1673.4	1676.6	1690.9	1694.0
17.5°	1638.6	1643.3	1651.2	1667.1	1670.3
20°	1602.1	1608.5	1618.0	1638.6	1643.3
22.5°	1562.5	1568.8	1584.7	1603.7	1611.6
25°	1516.5	1529.2	1545.1	1570.4	1575.2
27.5°	1470.6	1481.7	1502.3	1529.2	1535.6
30°	1416.7	1434.1	1459.5	1486.4	1492.8
32.5°	1364.4	1381.9	1412.0	1440.5	1448.4
35°	1310.5	1326.4	1358.1	1391.4	1400.9
37.5°	1248.7	1269.3	1304.2	1337.5	1347.0
40°	1183.8	1209.1	1248.7	1283.6	1294.7
42.5°	1122.0	1148.9	1188.5	1226.6	1239.2
45°	1057.0	1082.3	1129.9	1172.7	1182.2
47.5°	990.4	1019.0	1069.7	1112.5	1128.3
50°	923.9	954.0	1007.9	1052.2	1061.7
52.5°	857.3	889.0	946.1	993.6	998.4
55°	787.6	822.5	882.7	928.6	938.1
57.5°	724.2	754.3	819.3	866.8	877.9
60°	654.5	687.8	757.5	801.9	816.1
62.5°	587.9	622.8	695.7	740.1	752.7
65°	518.2	557.8	629.1	681.4	694.1
67.5°	458.0	496.0	572.1	622.8	635.5
70°	388.2	431.0	511.9	564.2	576.8
72.5°	328.0	372.4	453.2	503.9	522.9
75°	263.1	313.8	394.6	448.5	461.1
77.5°	199.7	258.3	340.7	381.9	381.9
80°	142.6	204.4	280.5	299.5	302.7
82.5°	93.5	153.7	207.6	206.0	206.0
85°	53.9	99.8	123.6	120.4	120.4
87.5°	20.6	41.2	44.4	44.4	42.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)