

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: P311654

Luminaire Tested: **24FCZ2-55HE-UNV-L82765-S-CP250-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: P311654  
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-L82765-S-CP250-W2A-U-4000K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.250" 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**

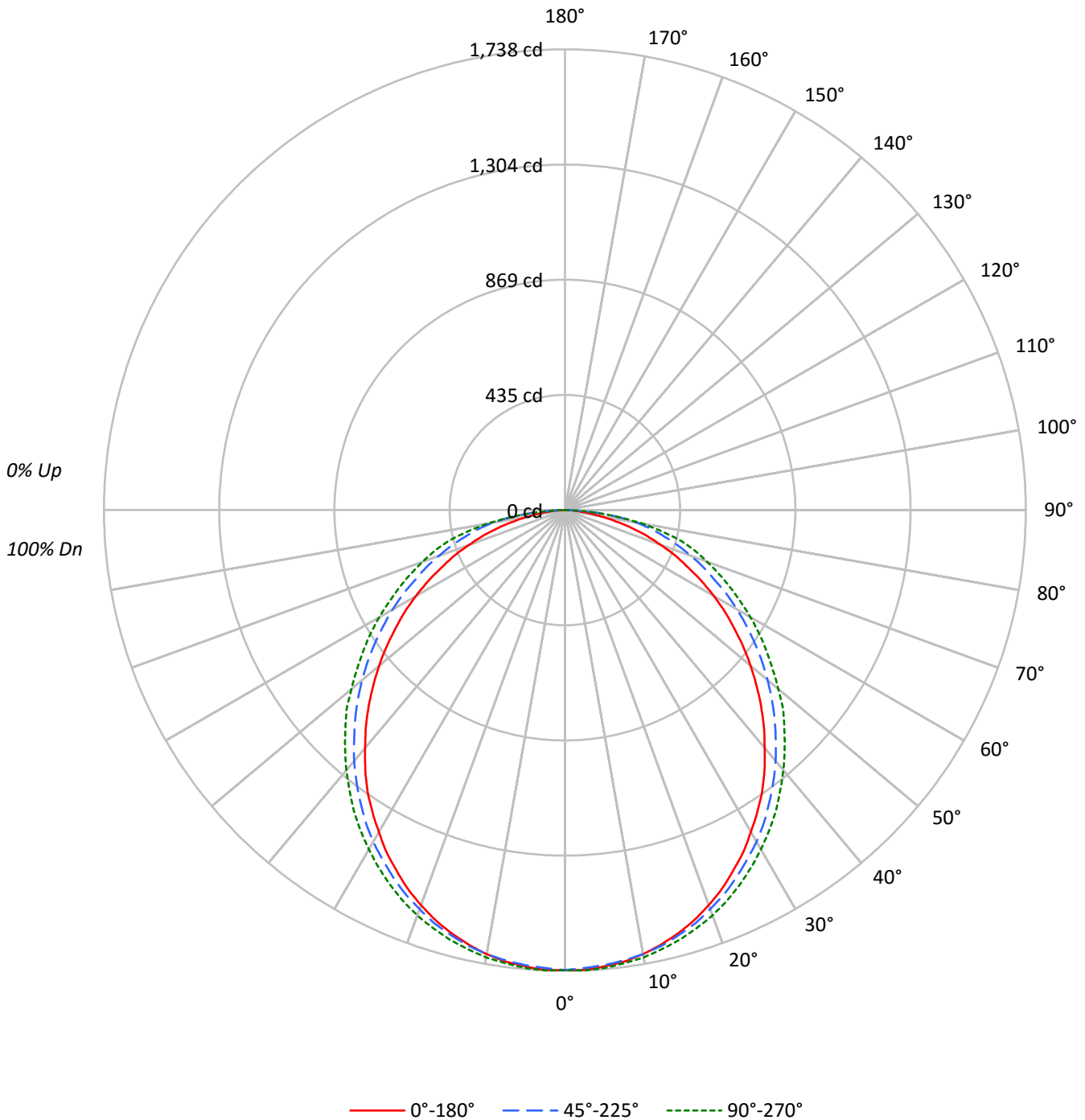
Lumens per Lamp: N/A  
Luminaire Lumens: 4939.0 lumens  
Efficiency: N/A  
Efficacy: 113.3 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 43.6  
Input Voltage (V): NR  
Input Current (A<sub>in</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°	2335	2335	2335
5°	2333	2327	2341
10°	2323	2323	2341
15°	2301	2312	2336
20°	2271	2294	2329
25°	2229	2271	2315
30°	2179	2245	2296
35°	2131	2208	2278
40°	2058	2171	2251
45°	1991	2128	2227
50°	1914	2089	2200
55°	1829	2050	2179
60°	1743	2018	2174
65°	1633	1983	2188
70°	1512	1993	2246
75°	1354	2031	2373
80°	1094	2152	2321
85°	823	1890	1840



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	164.3	3.3
10°-20°	469.4	9.5
20°-30°	705.5	14.3
30°-40°	840.4	17.0
40°-50°	860.1	17.4
50°-60°	774.4	15.7
60°-70°	608.1	12.3
70°-80°	394.7	8.0
80°-90°	122.1	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°	1339.2	27.1
0°-40°	2179.6	44.1
0°-60°	3814.1	77.2
0°-90°	4939.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4939.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1735	1735	1735	1735	1735	
5°	1727	1730	1723	1732	1734	164
15°	1652	1657	1660	1674	1677	466
25°	1501	1514	1530	1555	1559	692
35°	1297	1313	1344	1377	1387	809
45°	1046	1072	1119	1161	1170	807
55°	780	814	874	919	929	699
65°	513	552	623	675	687	511
75°	260	311	391	444	456	276
85°	53	99	122	119	119	64
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1735.1	1735.1	1735.1	1735.1	1735.1
2.5°	1736.7	1736.7	1728.8	1736.7	1738.2
5°	1727.3	1730.4	1722.6	1732.0	1733.5
7.5°	1717.8	1717.8	1713.1	1722.6	1724.1
10°	1700.6	1702.2	1700.6	1711.6	1713.1
12.5°	1678.6	1681.8	1683.3	1694.3	1695.9
15°	1652.0	1656.7	1659.8	1673.9	1677.1
17.5°	1622.1	1626.9	1634.7	1650.4	1653.5
20°	1586.1	1592.3	1601.8	1622.1	1626.9
22.5°	1546.8	1553.1	1568.8	1587.6	1595.5
25°	1501.4	1513.9	1529.6	1554.7	1559.4
27.5°	1455.9	1466.8	1487.2	1513.9	1520.2
30°	1402.5	1419.8	1444.9	1471.5	1477.8
32.5°	1350.7	1368.0	1397.8	1426.0	1433.9
35°	1297.4	1313.1	1344.5	1377.4	1386.8
37.5°	1236.2	1256.6	1291.1	1324.1	1333.5
40°	1171.9	1197.0	1236.2	1270.7	1281.7
42.5°	1110.7	1137.4	1176.6	1214.3	1226.8
45°	1046.4	1071.5	1118.6	1160.9	1170.3
47.5°	980.5	1008.7	1058.9	1101.3	1117.0
50°	914.6	944.4	997.8	1041.7	1051.1
52.5°	848.7	880.1	936.6	983.6	988.3
55°	779.7	814.2	873.8	919.3	928.7
57.5°	716.9	746.8	811.1	858.1	869.1
60°	647.9	680.9	749.9	793.8	807.9
62.5°	582.0	616.5	688.7	732.6	745.2
65°	513.0	552.2	622.8	674.6	687.1
67.5°	453.4	491.0	566.3	616.5	629.1
70°	384.4	426.7	506.7	558.5	571.0
72.5°	324.7	368.7	448.7	498.9	517.7
75°	260.4	310.6	390.6	444.0	456.5
77.5°	197.7	255.7	337.3	378.1	378.1
80°	141.2	202.4	277.7	296.5	299.6
82.5°	92.6	152.2	205.5	203.9	203.9
85°	53.3	98.8	122.4	119.2	119.2
87.5°	20.4	40.8	43.9	43.9	42.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)