

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: P310940

Luminaire Tested: **24FCZ2-55HE-UNV-L82765-CA08-W2A-U-2700K**

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: P310940  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-15)  
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-CA08-W2A-U-2700K  
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.08" ACRYLIC SHEET  
Light Source: (336) 2700K 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**

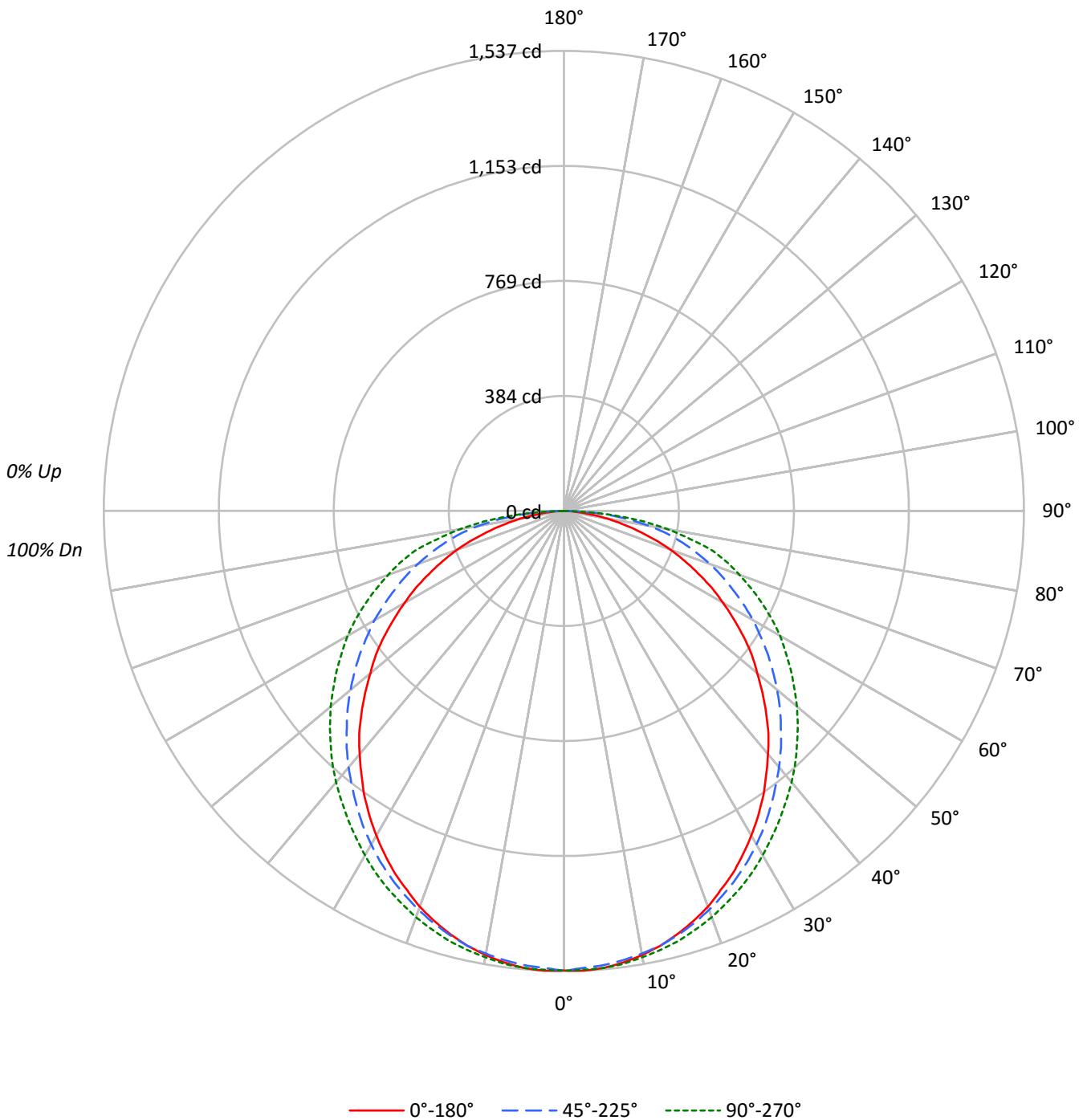
Lumens per Lamp: N/A  
Luminaire Lumens: 4656.0 lumens  
Efficiency: N/A  
Efficacy: 108.0 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 43.1  
Input Voltage (V): NR  
Input Current (A<sub>in</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	98	94	105	100	96	92	96	92	89	92	89	87	88	86	84	82
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	79	67	58	52	64	57	51	62	56	50	60	54	50	47
5	74	61	52	45	72	60	51	44	58	50	44	56	49	43	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	64	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	37	31	57	45	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	2066	2066	2066
5°	2070	2057	2070
10°	2058	2051	2068
15°	2040	2044	2070
20°	2015	2030	2068
25°	1984	2016	2066
30°	1946	1999	2064
35°	1908	1979	2065
40°	1864	1964	2078
45°	1819	1952	2096
50°	1765	1947	2128
55°	1721	1950	2171
60°	1654	1966	2245
65°	1579	1987	2326
70°	1495	2048	2455
75°	1333	2136	2682
80°	1137	2263	2741
85°	810	2242	2623



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	145.3	3.1
10°-20°	415.5	8.9
20°-30°	627.6	13.5
30°-40°	756.4	16.2
40°-50°	794.1	17.1
50°-60°	742.9	16.0
60°-70°	613.5	13.2
70°-80°	418.1	9.0
80°-90°	142.6	3.1
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°	1188.4	25.5
0°-40°	1944.8	41.8
0°-60°	3481.8	74.8
0°-90°	4656.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4656.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1536	1536	1536	1536	1536	
5°	1532	1531	1523	1532	1532	145
15°	1464	1466	1468	1483	1486	413
25°	1336	1342	1358	1384	1392	615
35°	1162	1174	1205	1245	1257	726
45°	956	976	1026	1081	1101	737
55°	734	763	831	899	925	655
65°	496	538	624	703	731	492
75°	256	315	411	488	516	273
85°	52	104	145	164	170	66
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1535.5	1535.5	1535.5	1535.5	1535.5
2.5°	1537.1	1535.5	1527.8	1535.5	1534.0
5°	1532.4	1530.9	1523.2	1532.4	1532.4
7.5°	1521.6	1521.6	1513.9	1524.7	1526.2
10°	1506.2	1506.2	1501.5	1513.9	1513.9
12.5°	1487.6	1487.6	1487.6	1500.0	1501.5
15°	1464.4	1466.0	1467.5	1483.0	1486.1
17.5°	1436.6	1439.7	1444.4	1462.9	1466.0
20°	1407.3	1410.4	1418.1	1439.7	1444.4
22.5°	1370.2	1377.9	1388.8	1413.5	1418.1
25°	1336.2	1342.4	1357.9	1384.1	1391.8
27.5°	1294.5	1303.8	1323.9	1351.7	1362.5
30°	1252.8	1262.1	1286.8	1319.2	1328.5
32.5°	1208.0	1221.9	1248.2	1282.2	1293.0
35°	1161.7	1174.0	1204.9	1245.1	1257.4
37.5°	1110.7	1127.7	1161.7	1204.9	1220.4
40°	1061.3	1079.8	1118.4	1164.8	1183.3
42.5°	1011.8	1030.4	1073.6	1126.1	1144.7
45°	956.2	976.3	1025.7	1081.3	1101.4
47.5°	900.6	925.3	979.4	1038.1	1059.7
50°	843.4	871.3	930.0	991.7	1016.5
52.5°	792.5	818.7	880.5	946.9	970.1
55°	733.8	763.1	831.1	899.1	925.3
57.5°	673.5	706.0	778.6	852.7	879.0
60°	614.8	650.4	730.7	804.8	834.2
62.5°	557.7	593.2	676.6	753.9	783.2
65°	495.9	537.6	624.1	702.9	730.7
67.5°	437.2	482.0	573.1	650.4	678.2
70°	380.0	423.3	520.6	596.3	624.1
72.5°	318.2	367.7	465.0	543.8	573.1
75°	256.4	315.1	410.9	488.1	516.0
77.5°	199.3	259.5	355.3	418.6	432.5
80°	146.8	208.5	292.0	336.8	353.8
82.5°	94.2	156.0	222.4	254.9	268.8
85°	52.5	103.5	145.2	163.7	169.9
87.5°	21.6	44.8	58.7	66.4	66.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)