

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: P310942

Luminaire Tested: **24FCZ2-55HE-UNV-L82765-CA08-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: P310942  
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-3500K  
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.08" ACRYLIC 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**

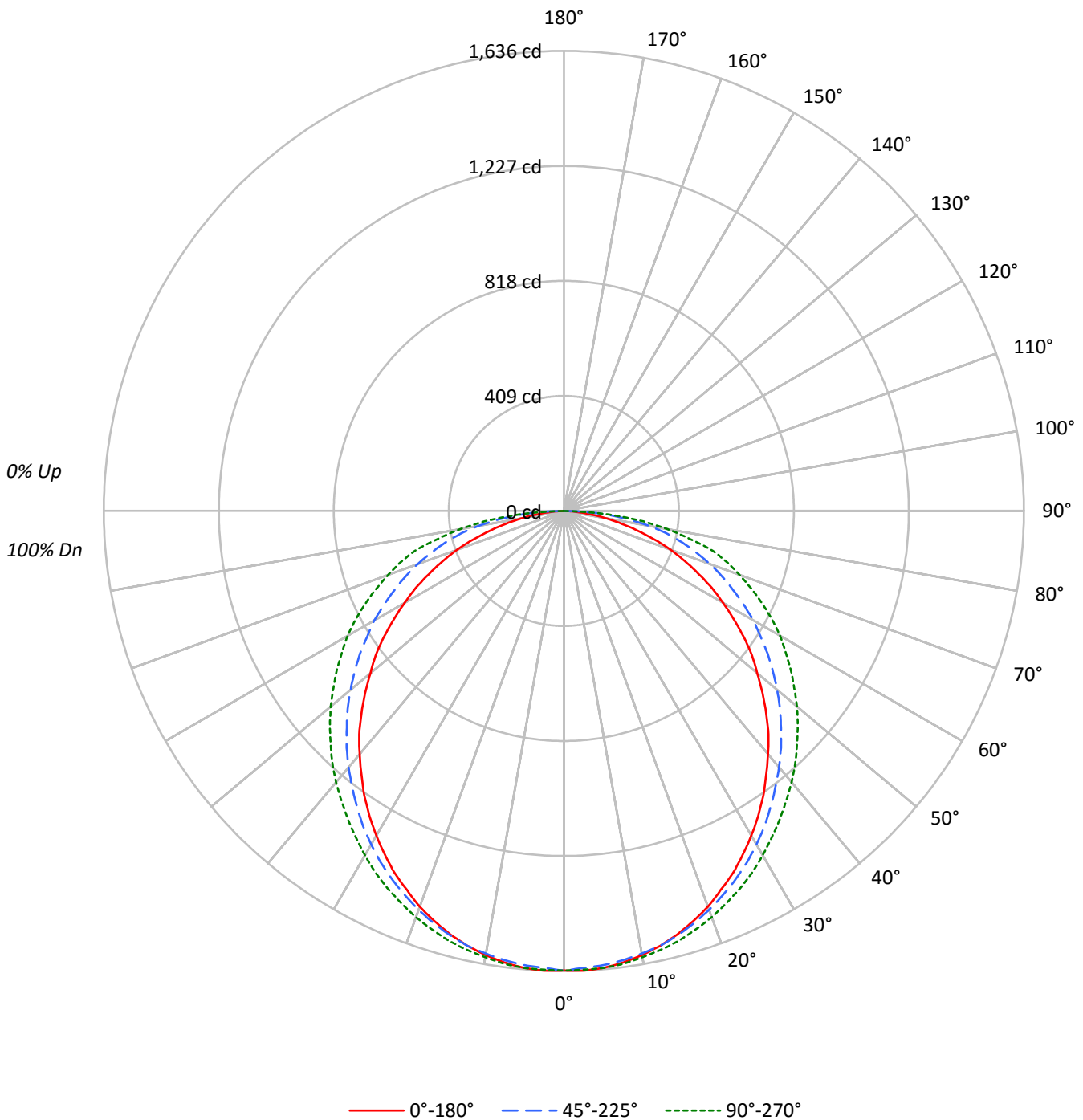
Lumens per Lamp: N/A  
Luminaire Lumens: 4956.0 lumens  
Efficiency: N/A  
Efficacy: 114.5 lumens/watt  
Spacing Criteria (0/90/45): 1.22 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 43.3  
Input Voltage (V): NR  
Input Current (A<sub>in</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



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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°	2199	2199	2199
5°	2203	2190	2203
10°	2190	2184	2202
15°	2171	2176	2203
20°	2145	2161	2201
25°	2112	2146	2199
30°	2072	2128	2197
35°	2031	2107	2199
40°	1984	2091	2212
45°	1937	2077	2231
50°	1879	2072	2265
55°	1832	2075	2310
60°	1761	2093	2389
65°	1680	2115	2476
70°	1591	2180	2613
75°	1419	2274	2855
80°	1210	2408	2917
85°	863	2387	2793



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	154.7	3.1
10°-20°	442.3	8.9
20°-30°	668.0	13.5
30°-40°	805.1	16.2
40°-50°	845.3	17.1
50°-60°	790.8	16.0
60°-70°	653.0	13.2
70°-80°	445.0	9.0
80°-90°	151.8	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°	1265.0	25.5
0°-40°	2070.2	41.8
0°-60°	3706.2	74.8
0°-90°	4956.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4956.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1634	1634	1634	1634	1634	
5°	1631	1630	1621	1631	1631	155
15°	1559	1560	1562	1578	1582	439
25°	1422	1429	1445	1473	1482	654
35°	1236	1250	1283	1325	1338	773
45°	1018	1039	1092	1151	1172	785
55°	781	812	885	957	985	697
65°	528	572	664	748	778	524
75°	273	335	437	520	549	291
85°	56	110	155	174	181	70
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1634.4	1634.4	1634.4	1634.4	1634.4
2.5°	1636.1	1634.4	1626.2	1634.4	1632.8
5°	1631.2	1629.5	1621.3	1631.2	1631.2
7.5°	1619.6	1619.6	1611.4	1622.9	1624.6
10°	1603.2	1603.2	1598.3	1611.4	1611.4
12.5°	1583.5	1583.5	1583.5	1596.6	1598.3
15°	1558.8	1560.5	1562.1	1578.5	1581.8
17.5°	1529.2	1532.5	1537.4	1557.2	1560.5
20°	1498.0	1501.3	1509.5	1532.5	1537.4
22.5°	1458.5	1466.7	1478.2	1504.5	1509.5
25°	1422.3	1428.9	1445.3	1473.3	1481.5
27.5°	1377.9	1387.8	1409.2	1438.8	1450.3
30°	1333.5	1343.4	1369.7	1404.2	1414.1
32.5°	1285.9	1300.7	1328.6	1364.8	1376.3
35°	1236.5	1249.7	1282.6	1325.3	1338.5
37.5°	1182.3	1200.3	1236.5	1282.6	1299.0
40°	1129.6	1149.4	1190.5	1239.8	1259.5
42.5°	1077.0	1096.8	1142.8	1198.7	1218.4
45°	1017.8	1039.2	1091.8	1151.0	1172.4
47.5°	958.6	984.9	1042.5	1105.0	1128.0
50°	897.8	927.4	989.9	1055.6	1082.0
52.5°	843.5	871.5	937.3	1008.0	1032.6
55°	781.0	812.3	884.6	957.0	984.9
57.5°	716.9	751.5	828.7	907.7	935.6
60°	654.4	692.3	777.8	856.7	887.9
62.5°	593.6	631.4	720.2	802.4	833.7
65°	527.8	572.2	664.3	748.2	777.8
67.5°	465.3	513.0	610.0	692.3	721.9
70°	404.5	450.5	554.1	634.7	664.3
72.5°	338.7	391.3	494.9	578.8	610.0
75°	273.0	335.4	437.4	519.6	549.2
77.5°	212.1	276.2	378.2	445.6	460.4
80°	156.2	222.0	310.8	358.5	376.5
82.5°	100.3	166.1	236.8	271.3	286.1
85°	55.9	110.2	154.6	174.3	180.9
87.5°	23.0	47.7	62.5	70.7	70.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)