

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: P313290

Luminaire Tested: **24FCZ2-55HE-UNV-L83050-HRP-CA08-W2A-U-3000K**

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: P313290  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-20)  
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-HRP-CA08-W2A-U-3000K  
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.08" ACRYLIC SHEET  
Light Source: (336) 3000K 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: 3725.0 lumens  
Efficiency: N/A  
Efficacy: 86.6 lumens/watt  
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

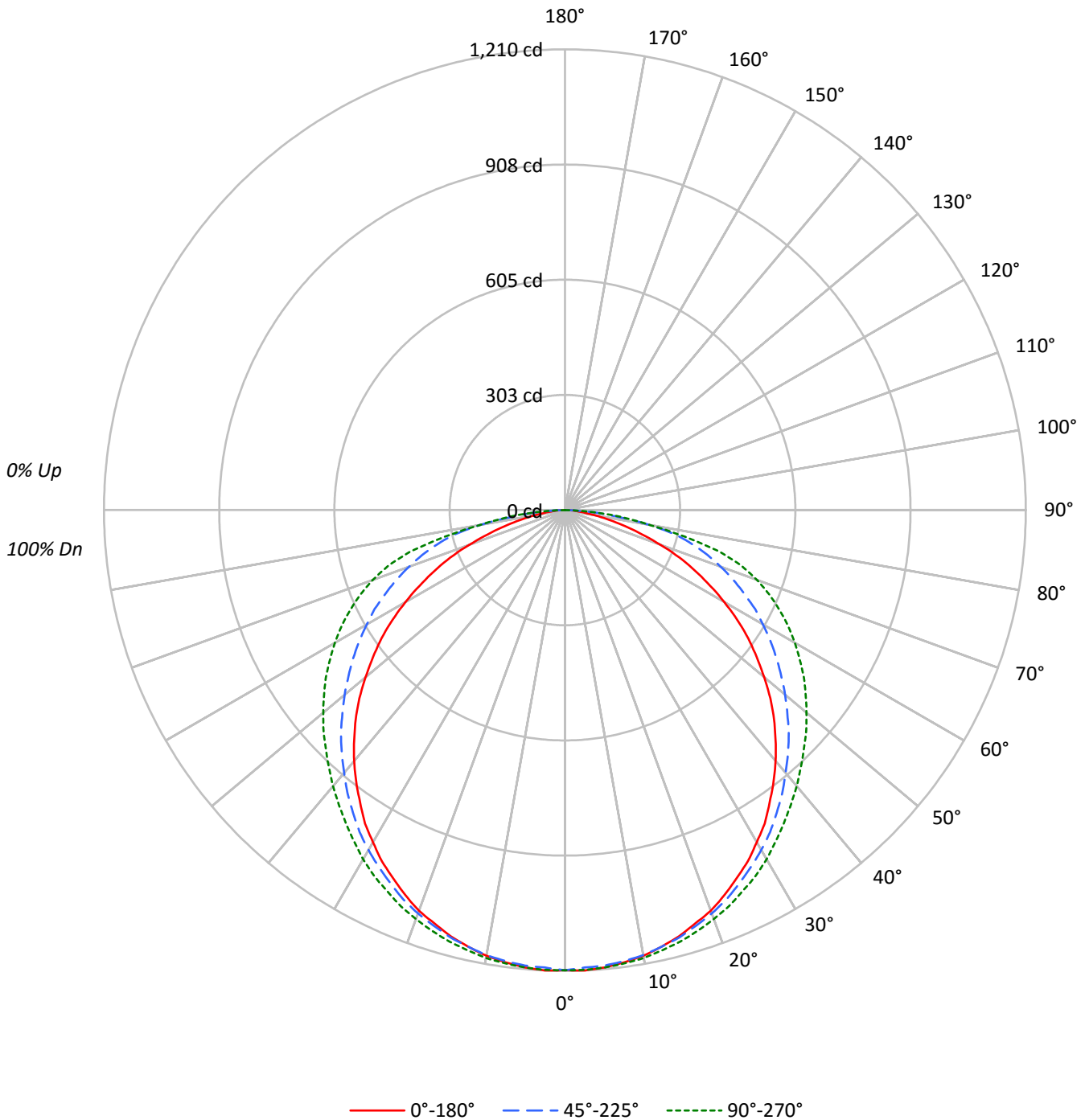
Input Watts (W): 43  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	101	96	93	96	93	90	92	90	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58	56
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	36	30	57	44	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	24	35	29	24	23

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

	0°	45°	90°
0°	1626	1626	1626
5°	1628	1622	1628
10°	1624	1621	1632
15°	1614	1618	1634
20°	1603	1614	1637
25°	1584	1607	1639
30°	1565	1601	1645
35°	1539	1593	1647
40°	1512	1583	1663
45°	1478	1582	1688
50°	1430	1580	1733
55°	1379	1591	1796
60°	1301	1616	1876
65°	1202	1653	1981
70°	1049	1712	2111
75°	851	1800	2181
80°	628	1764	1764
85°	482	1300	1468



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	114.5	3.1
10°-20°	328.8	8.8
20°-30°	500.5	13.4
30°-40°	607.7	16.3
40°-50°	642.1	17.2
50°-60°	605.9	16.3
60°-70°	503.8	13.5
70°-80°	331.4	8.9
80°-90°	90.3	2.4
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°	943.8	25.3
0°-40°	1551.5	41.7
0°-60°	2799.5	75.2
0°-90°	3725.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3725.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1209	1209	1209	1209	1209	
5°	1206	1206	1201	1206	1206	114
15°	1159	1160	1162	1173	1173	327
25°	1067	1073	1082	1101	1104	492
35°	937	948	970	995	1003	587
45°	777	792	831	872	887	598
55°	588	613	678	742	766	524
65°	377	421	519	596	622	373
75°	164	239	346	410	420	176
85°	31	69	84	94	95	38
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1208.6	1208.6	1208.6	1208.6	1208.6
2.5°	1210.1	1208.6	1202.3	1208.6	1208.6
5°	1205.5	1205.5	1200.8	1205.5	1205.5
7.5°	1197.7	1197.7	1194.5	1200.8	1200.8
10°	1188.3	1188.3	1186.7	1194.5	1194.5
12.5°	1174.3	1175.8	1174.3	1183.6	1183.6
15°	1158.7	1160.2	1161.8	1172.7	1172.7
17.5°	1138.4	1141.5	1144.6	1157.1	1158.7
20°	1119.7	1121.2	1127.5	1141.5	1143.1
22.5°	1094.7	1099.4	1107.2	1121.2	1125.9
25°	1066.7	1072.9	1082.3	1101.0	1104.1
27.5°	1040.2	1044.8	1057.3	1077.6	1083.8
30°	1007.4	1015.2	1030.8	1051.1	1058.9
32.5°	976.2	984.0	1002.7	1024.6	1030.8
35°	937.2	948.1	970.0	994.9	1002.7
37.5°	899.8	910.7	937.2	965.3	974.7
40°	860.8	873.3	901.4	934.1	946.6
42.5°	818.7	835.9	867.1	902.9	917.0
45°	776.6	792.2	831.2	871.7	887.3
47.5°	731.4	750.1	792.2	840.5	859.3
50°	683.0	706.4	754.8	807.8	828.1
52.5°	634.7	661.2	715.8	775.1	796.9
55°	587.9	612.9	678.4	742.3	765.7
57.5°	536.5	567.6	639.4	708.0	731.4
60°	483.4	517.7	600.4	672.1	697.1
62.5°	430.4	469.4	563.0	634.7	661.2
65°	377.4	421.1	519.3	595.7	622.2
67.5°	325.9	374.3	478.8	555.2	581.7
70°	266.7	327.5	435.1	509.9	536.5
72.5°	212.1	282.3	393.0	463.2	486.6
75°	163.7	238.6	346.2	410.1	419.5
77.5°	120.1	194.9	297.9	319.7	321.2
80°	81.1	155.9	227.7	224.6	227.7
82.5°	53.0	117.0	143.5	160.6	162.2
85°	31.2	68.6	84.2	93.6	95.1
87.5°	15.6	23.4	29.6	31.2	34.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)