

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: P313301

Luminaire Tested: **24FCZ2-55HE-UNV-L83050-HRP-CP125-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: P313301
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-CP125-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" 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: 3851.0 lumens
Efficiency: N/A
Efficacy: 89.4 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

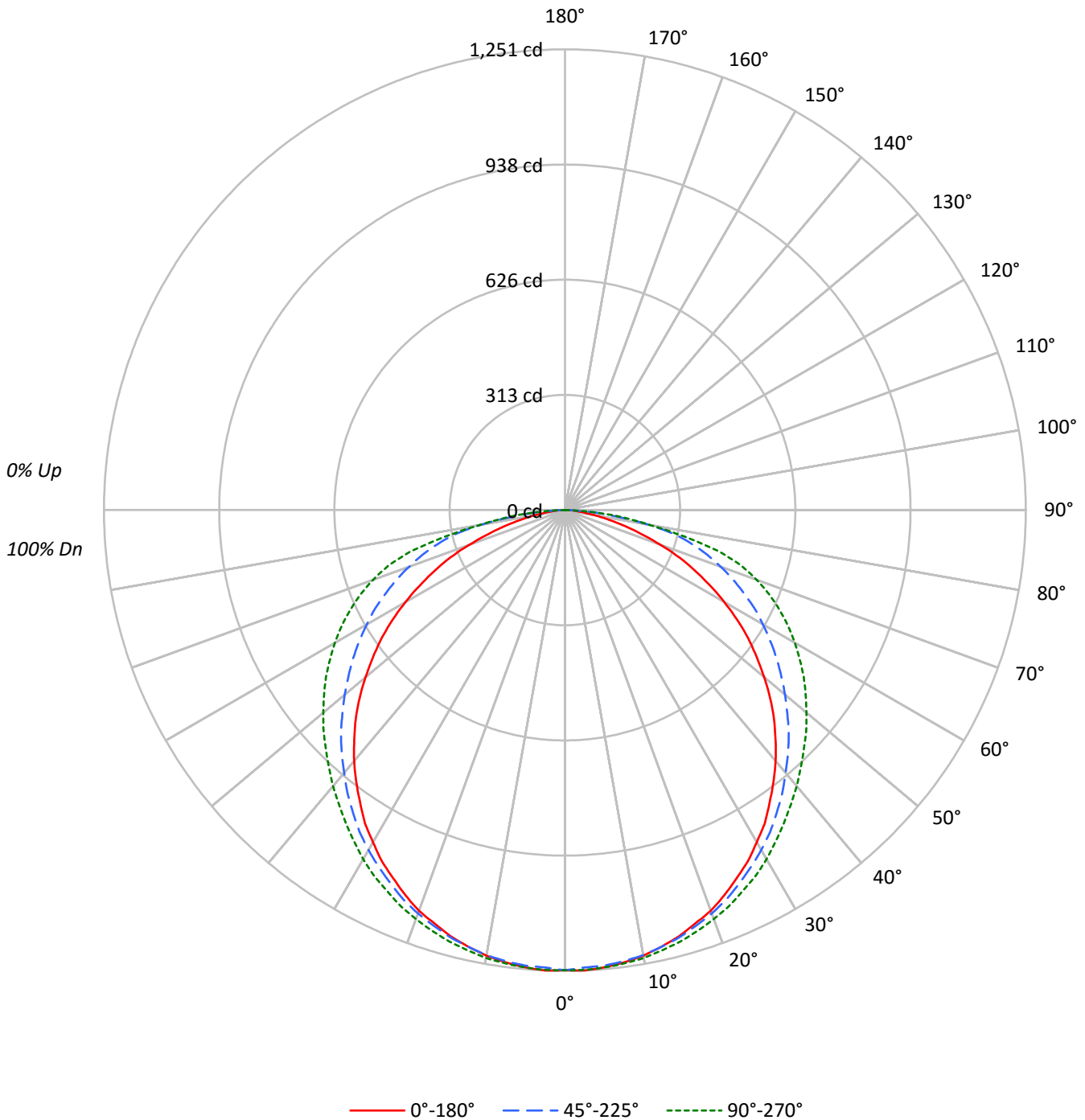
Input Watts (W): 43.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1681	1681	1681
5°	1683	1677	1683
10°	1678	1676	1687
15°	1669	1673	1689
20°	1657	1669	1692
25°	1637	1661	1695
30°	1618	1656	1701
35°	1591	1647	1703
40°	1563	1637	1719
45°	1528	1635	1745
50°	1478	1633	1792
55°	1426	1645	1857
60°	1345	1670	1939
65°	1242	1709	2048
70°	1085	1769	2182
75°	880	1861	2255
80°	649	1824	1824
85°	497	1345	1518



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	118.4	3.1
10°-20°	339.9	8.8
20°-30°	517.4	13.4
30°-40°	628.3	16.3
40°-50°	663.8	17.2
50°-60°	626.4	16.3
60°-70°	520.8	13.5
70°-80°	342.6	8.9
80°-90°	93.4	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°	975.7	25.3
0°-40°	1604.0	41.7
0°-60°	2894.2	75.2
0°-90°	3851.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3851.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1250	1250	1250	1250	1250	
5°	1246	1246	1241	1246	1246	118
15°	1198	1200	1201	1212	1212	338
25°	1103	1109	1119	1138	1141	509
35°	969	980	1003	1029	1037	607
45°	803	819	859	901	917	618
55°	608	634	701	767	792	541
65°	390	435	537	616	643	386
75°	169	247	358	424	434	182
85°	32	71	87	97	98	39
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1249.5	1249.5	1249.5	1249.5	1249.5
2.5°	1251.1	1249.5	1243.0	1249.5	1249.5
5°	1246.2	1246.2	1241.4	1246.2	1246.2
7.5°	1238.2	1238.2	1235.0	1241.4	1241.4
10°	1228.5	1228.5	1226.9	1235.0	1235.0
12.5°	1214.0	1215.6	1214.0	1223.7	1223.7
15°	1197.9	1199.5	1201.1	1212.4	1212.4
17.5°	1176.9	1180.1	1183.4	1196.3	1197.9
20°	1157.6	1159.2	1165.6	1180.1	1181.7
22.5°	1131.8	1136.6	1144.7	1159.2	1164.0
25°	1102.7	1109.2	1118.9	1138.2	1141.4
27.5°	1075.3	1080.2	1093.1	1114.0	1120.5
30°	1041.5	1049.5	1065.7	1086.6	1094.7
32.5°	1009.2	1017.3	1036.6	1059.2	1065.7
35°	968.9	980.2	1002.8	1028.6	1036.6
37.5°	930.2	941.5	968.9	998.0	1007.6
40°	889.9	902.8	931.9	965.7	978.6
42.5°	846.4	864.1	896.4	933.5	948.0
45°	802.9	819.0	859.3	901.2	917.3
47.5°	756.1	775.5	819.0	869.0	888.3
50°	706.1	730.3	780.3	835.1	856.1
52.5°	656.2	683.6	740.0	801.3	823.8
55°	607.8	633.6	701.3	767.4	791.6
57.5°	554.6	586.8	661.0	731.9	756.1
60°	499.8	535.3	620.7	694.9	720.7
62.5°	445.0	485.3	582.0	656.2	683.6
65°	390.2	435.3	536.9	615.9	643.3
67.5°	337.0	386.9	494.9	573.9	601.4
70°	275.7	338.6	449.8	527.2	554.6
72.5°	219.3	291.8	406.3	478.8	503.0
75°	169.3	246.7	357.9	424.0	433.7
77.5°	124.1	201.5	307.9	330.5	332.1
80°	83.8	161.2	235.4	232.2	235.4
82.5°	54.8	120.9	148.3	166.1	167.7
85°	32.2	70.9	87.1	96.7	98.3
87.5°	16.1	24.2	30.6	32.2	35.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)