

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: P311633

Luminaire Tested: **24FCZ2-55HE-UNV-L82765-S-CP125-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: P311633
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-CP125-W2A-U-2700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB 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: 4780.0 lumens
Efficiency: N/A
Efficacy: 110.9 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

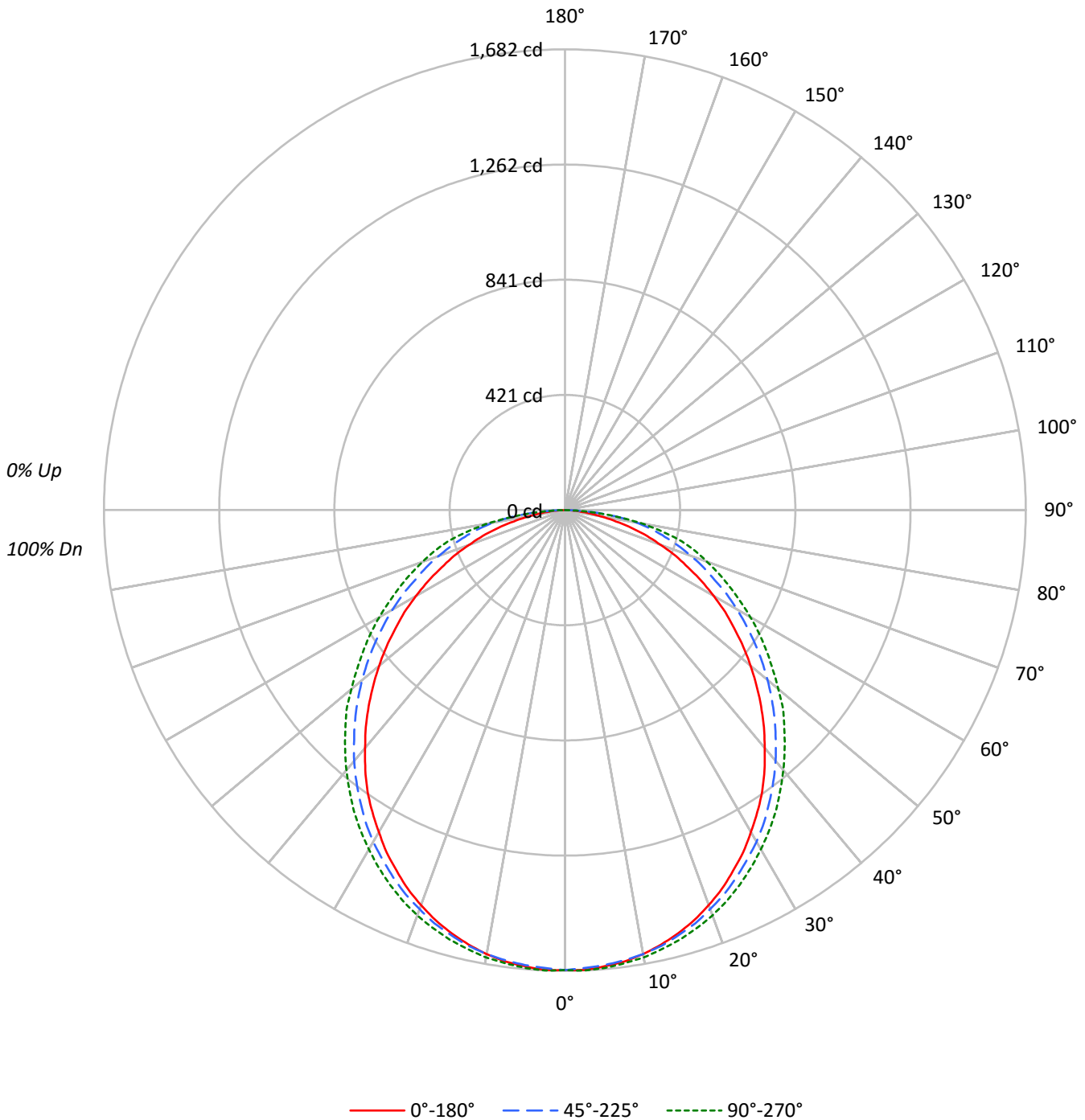
Input Watts (W): 43.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	2259	2259	2259
5°	2258	2252	2266
10°	2249	2249	2265
15°	2227	2238	2261
20°	2198	2220	2254
25°	2157	2198	2241
30°	2109	2173	2222
35°	2062	2137	2205
40°	1992	2101	2179
45°	1927	2060	2155
50°	1853	2021	2129
55°	1770	1984	2108
60°	1688	1953	2104
65°	1581	1919	2117
70°	1463	1929	2174
75°	1310	1966	2297
80°	1058	2082	2247
85°	797	1828	1782



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	159.0	3.3
10°-20°	454.3	9.5
20°-30°	682.8	14.3
30°-40°	813.4	17.0
40°-50°	832.5	17.4
50°-60°	749.4	15.7
60°-70°	588.5	12.3
70°-80°	382.0	8.0
80°-90°	118.1	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°	1296.1	27.1
0°-40°	2109.4	44.1
0°-60°	3691.3	77.2
0°-90°	4780.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4780.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1679	1679	1679	1679	1679	
5°	1672	1675	1667	1676	1678	159
15°	1599	1603	1606	1620	1623	451
25°	1453	1465	1480	1505	1509	669
35°	1256	1271	1301	1333	1342	783
45°	1013	1037	1083	1124	1133	781
55°	755	788	846	890	899	677
65°	496	534	603	653	665	494
75°	252	301	378	430	442	267
85°	52	96	118	115	115	62
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1679.2	1679.2	1679.2	1679.2	1679.2
2.5°	1680.8	1680.8	1673.2	1680.8	1682.3
5°	1671.7	1674.7	1667.1	1676.2	1677.7
7.5°	1662.5	1662.5	1658.0	1667.1	1668.6
10°	1645.8	1647.4	1645.8	1656.5	1658.0
12.5°	1624.6	1627.6	1629.1	1639.8	1641.3
15°	1598.8	1603.3	1606.4	1620.0	1623.1
17.5°	1569.9	1574.5	1582.1	1597.3	1600.3
20°	1535.0	1541.1	1550.2	1569.9	1574.5
22.5°	1497.0	1503.1	1518.3	1536.5	1544.1
25°	1453.0	1465.2	1480.3	1504.6	1509.2
27.5°	1409.0	1419.6	1439.4	1465.2	1471.2
30°	1357.4	1374.1	1398.4	1424.2	1430.2
32.5°	1307.3	1324.0	1352.8	1380.1	1387.7
35°	1255.6	1270.8	1301.2	1333.1	1342.2
37.5°	1196.4	1216.2	1249.6	1281.4	1290.6
40°	1134.2	1158.5	1196.4	1229.8	1240.5
42.5°	1075.0	1100.8	1138.7	1175.2	1187.3
45°	1012.7	1037.0	1082.6	1123.5	1132.7
47.5°	948.9	976.3	1024.9	1065.9	1081.0
50°	885.2	914.0	965.6	1008.2	1017.3
52.5°	821.4	851.8	906.4	952.0	956.5
55°	754.6	788.0	845.7	889.7	898.8
57.5°	693.9	722.7	785.0	830.5	841.1
60°	627.1	658.9	725.7	768.3	781.9
62.5°	563.3	596.7	666.5	709.0	721.2
65°	496.5	534.4	602.8	652.9	665.0
67.5°	438.8	475.2	548.1	596.7	608.8
70°	372.0	413.0	490.4	540.5	552.7
72.5°	314.3	356.8	434.2	482.8	501.0
75°	252.0	300.6	378.1	429.7	441.8
77.5°	191.3	247.5	326.4	365.9	365.9
80°	136.6	195.9	268.7	287.0	290.0
82.5°	89.6	147.3	198.9	197.4	197.4
85°	51.6	95.7	118.4	115.4	115.4
87.5°	19.7	39.5	42.5	42.5	41.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)