

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: P310962

Luminaire Tested: **24FCZ2-55HE-UNV-L82765-CP125-W2A-U-4500K**

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: P310962
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-CP125-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" POLYCARB SHEET
Light Source: (336) 4500K 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: 5036.0 lumens
Efficiency: N/A
Efficacy: 114.7 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

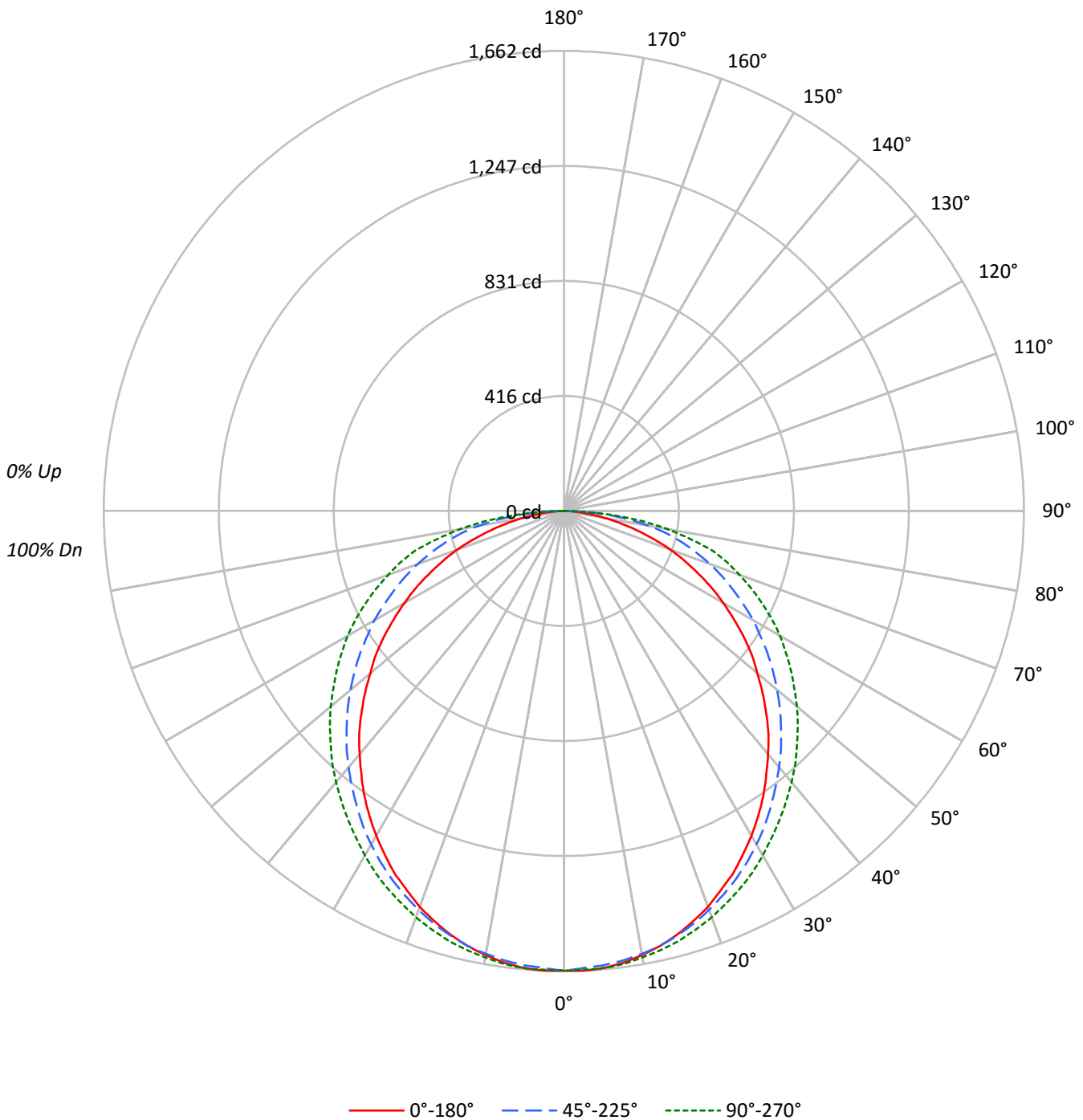
Input Watts (W): 43.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2235	2235	2235
5°	2239	2225	2239
10°	2226	2219	2237
15°	2206	2211	2239
20°	2179	2196	2237
25°	2146	2180	2235
30°	2105	2162	2232
35°	2064	2141	2234
40°	2016	2125	2248
45°	1968	2111	2267
50°	1910	2106	2301
55°	1862	2109	2348
60°	1790	2127	2428
65°	1707	2149	2516
70°	1617	2215	2655
75°	1442	2310	2901
80°	1230	2447	2965
85°	877	2425	2837



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	157.2	3.1
10°-20°	449.4	8.9
20°-30°	678.8	13.5
30°-40°	818.1	16.2
40°-50°	858.9	17.1
50°-60°	803.5	16.0
60°-70°	663.6	13.2
70°-80°	452.2	9.0
80°-90°	154.2	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°	1285.4	25.5
0°-40°	2103.6	41.8
0°-60°	3766.0	74.8
0°-90°	5036.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5036.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1661	1661	1661	1661	1661	
5°	1658	1656	1648	1658	1658	157
15°	1584	1586	1587	1604	1607	446
25°	1445	1452	1469	1497	1505	665
35°	1256	1270	1303	1347	1360	785
45°	1034	1056	1109	1170	1191	798
55°	794	825	899	972	1001	708
65°	536	582	675	760	790	532
75°	277	341	444	528	558	296
85°	57	112	157	177	184	71
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1660.8	1660.8	1660.8	1660.8	1660.8
2.5°	1662.5	1660.8	1652.5	1660.8	1659.2
5°	1657.5	1655.8	1647.5	1657.5	1657.5
7.5°	1645.8	1645.8	1637.4	1649.1	1650.8
10°	1629.1	1629.1	1624.1	1637.4	1637.4
12.5°	1609.0	1609.0	1609.0	1622.4	1624.1
15°	1584.0	1585.6	1587.3	1604.0	1607.4
17.5°	1553.9	1557.2	1562.2	1582.3	1585.6
20°	1522.1	1525.5	1533.8	1557.2	1562.2
22.5°	1482.0	1490.4	1502.1	1528.8	1533.8
25°	1445.3	1452.0	1468.7	1497.1	1505.4
27.5°	1400.2	1410.2	1431.9	1462.0	1473.7
30°	1355.1	1365.1	1391.8	1426.9	1436.9
32.5°	1306.6	1321.6	1350.1	1386.8	1398.5
35°	1256.5	1269.8	1303.3	1346.7	1360.1
37.5°	1201.3	1219.7	1256.5	1303.3	1320.0
40°	1147.9	1167.9	1209.7	1259.8	1279.9
42.5°	1094.4	1114.5	1161.2	1218.1	1238.1
45°	1034.3	1056.0	1109.4	1169.6	1191.3
47.5°	974.1	1000.8	1059.3	1122.8	1146.2
50°	912.3	942.4	1005.9	1072.7	1099.4
52.5°	857.1	885.6	952.4	1024.2	1049.3
55°	793.7	825.4	898.9	972.4	1000.8
57.5°	728.5	763.6	842.1	922.3	950.7
60°	665.0	703.4	790.3	870.5	902.3
62.5°	603.2	641.6	731.8	815.4	847.1
65°	536.3	581.5	675.0	760.2	790.3
67.5°	472.9	521.3	619.9	703.4	733.5
70°	411.0	457.8	563.1	644.9	675.0
72.5°	344.2	397.7	502.9	588.1	619.9
75°	277.4	340.9	444.4	528.0	558.1
77.5°	215.5	280.7	384.3	452.8	467.8
80°	158.7	225.6	315.8	364.2	382.6
82.5°	101.9	168.8	240.6	275.7	290.7
85°	56.8	111.9	157.1	177.1	183.8
87.5°	23.4	48.5	63.5	71.8	71.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)