

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: P314049

Luminaire Tested: **24FCZ2-55HE-UNV-L83050-CA125-W2A-U-5000K**

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: P314049
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-L83050-CA125-W2A-U-5000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" ACRYLIC SHEET
Light Source: (336) 5000K 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: 5360.0 lumens
Efficiency: N/A
Efficacy: 118.6 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

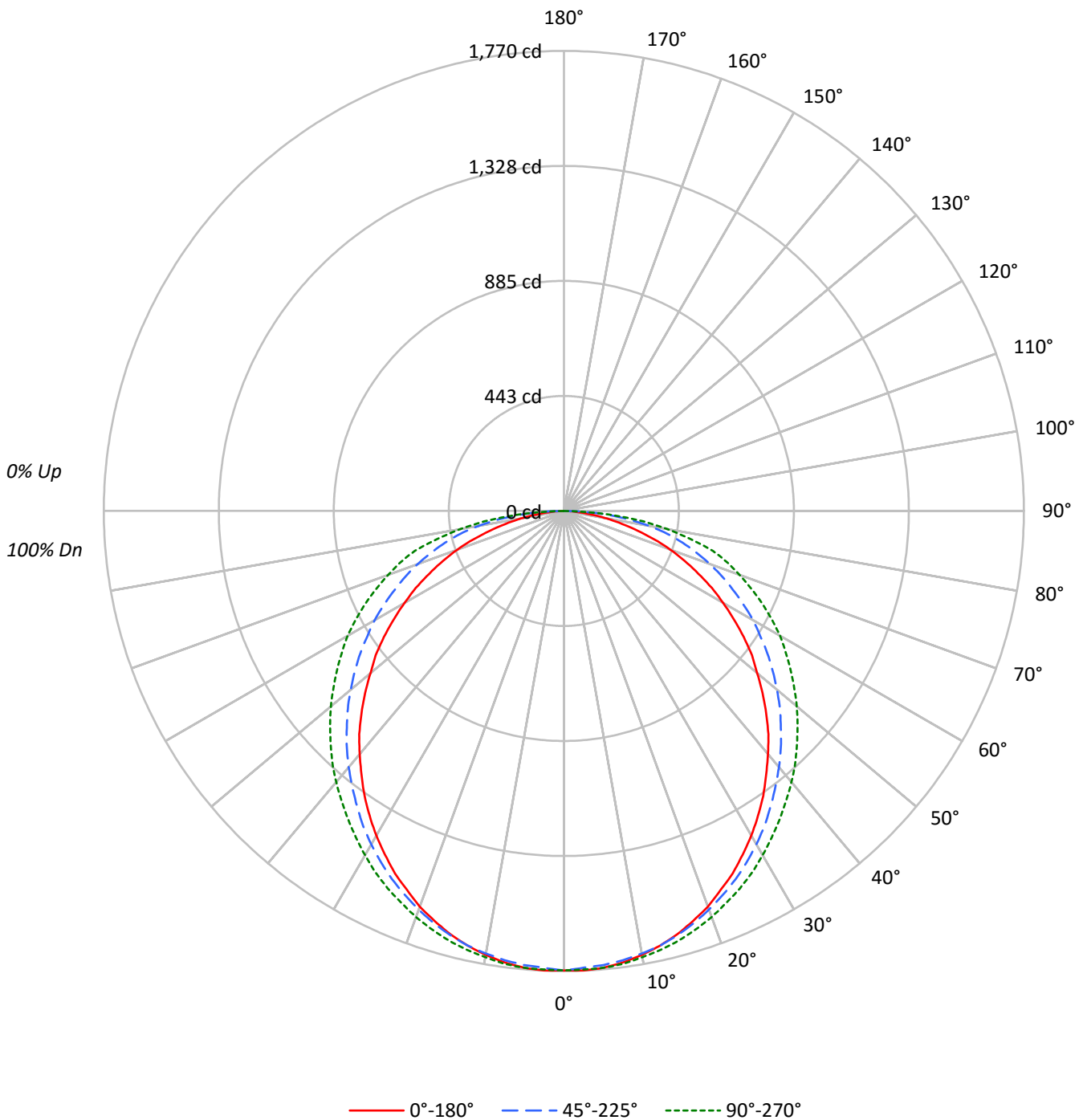
Input Watts (W): 45.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2378	2378	2378
5°	2383	2368	2383
10°	2369	2362	2381
15°	2348	2353	2383
20°	2320	2337	2381
25°	2284	2321	2379
30°	2241	2302	2376
35°	2197	2278	2378
40°	2146	2261	2393
45°	2095	2247	2413
50°	2033	2241	2449
55°	1981	2244	2499
60°	1905	2264	2584
65°	1818	2287	2678
70°	1721	2358	2827
75°	1535	2459	3088
80°	1309	2604	3155
85°	934	2581	3020



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	167.3	3.1
10°-20°	478.4	8.9
20°-30°	722.5	13.5
30°-40°	870.8	16.2
40°-50°	914.2	17.1
50°-60°	855.3	16.0
60°-70°	706.3	13.2
70°-80°	481.3	9.0
80°-90°	164.1	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°	1368.1	25.5
0°-40°	2238.9	41.8
0°-60°	4008.3	74.8
0°-90°	5360.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5360.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1768	1768	1768	1768	1768	
5°	1764	1762	1754	1764	1764	167
15°	1686	1688	1689	1707	1711	475
25°	1538	1545	1563	1593	1602	708
35°	1337	1352	1387	1433	1448	836
45°	1101	1124	1181	1245	1268	849
55°	845	878	957	1035	1065	754
65°	571	619	718	809	841	566
75°	295	363	473	562	594	315
85°	60	119	167	188	196	76
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1767.7	1767.7	1767.7	1767.7	1767.7
2.5°	1769.5	1767.7	1758.8	1767.7	1765.9
5°	1764.1	1762.3	1753.5	1764.1	1764.1
7.5°	1751.7	1751.7	1742.8	1755.2	1757.0
10°	1733.9	1733.9	1728.6	1742.8	1742.8
12.5°	1712.6	1712.6	1712.6	1726.8	1728.6
15°	1685.9	1687.7	1689.4	1707.2	1710.8
17.5°	1653.9	1657.4	1662.8	1684.1	1687.7
20°	1620.1	1623.6	1632.5	1657.4	1662.8
22.5°	1577.4	1586.3	1598.7	1627.2	1632.5
25°	1538.3	1545.4	1563.2	1593.4	1602.3
27.5°	1490.3	1500.9	1524.0	1556.1	1568.5
30°	1442.2	1452.9	1481.4	1518.7	1529.4
32.5°	1390.7	1406.7	1436.9	1476.0	1488.5
35°	1337.3	1351.5	1387.1	1433.4	1447.6
37.5°	1278.6	1298.2	1337.3	1387.1	1404.9
40°	1221.7	1243.1	1287.5	1340.9	1362.2
42.5°	1164.8	1186.2	1236.0	1296.4	1317.8
45°	1100.8	1123.9	1180.8	1244.8	1268.0
47.5°	1036.8	1065.2	1127.5	1195.1	1219.9
50°	971.0	1003.0	1070.6	1141.7	1170.2
52.5°	912.3	942.5	1013.7	1090.1	1116.8
55°	844.7	878.5	956.8	1035.0	1065.2
57.5°	775.4	812.7	896.3	981.7	1011.9
60°	707.8	748.7	841.2	926.5	960.3
62.5°	642.0	682.9	778.9	867.8	901.6
65°	570.9	618.9	718.5	809.1	841.2
67.5°	503.3	554.8	659.8	748.7	780.7
70°	437.5	487.3	599.3	686.4	718.5
72.5°	366.3	423.2	535.3	626.0	659.8
75°	295.2	362.8	473.0	562.0	594.0
77.5°	229.4	298.8	409.0	481.9	497.9
80°	168.9	240.1	336.1	387.7	407.2
82.5°	108.5	179.6	256.1	293.4	309.4
85°	60.5	119.1	167.2	188.5	195.6
87.5°	24.9	51.6	67.6	76.5	76.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)