

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: P314427

Luminaire Tested: **24FCZ2-55HE-UNV-L83050-S-CP125-W2A-U-4000K**

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: P314427
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-L83050-S-CP125-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB SHEET
Light Source: (336) 4000K 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: 5470.0 lumens
Efficiency: N/A
Efficacy: 124.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.27 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

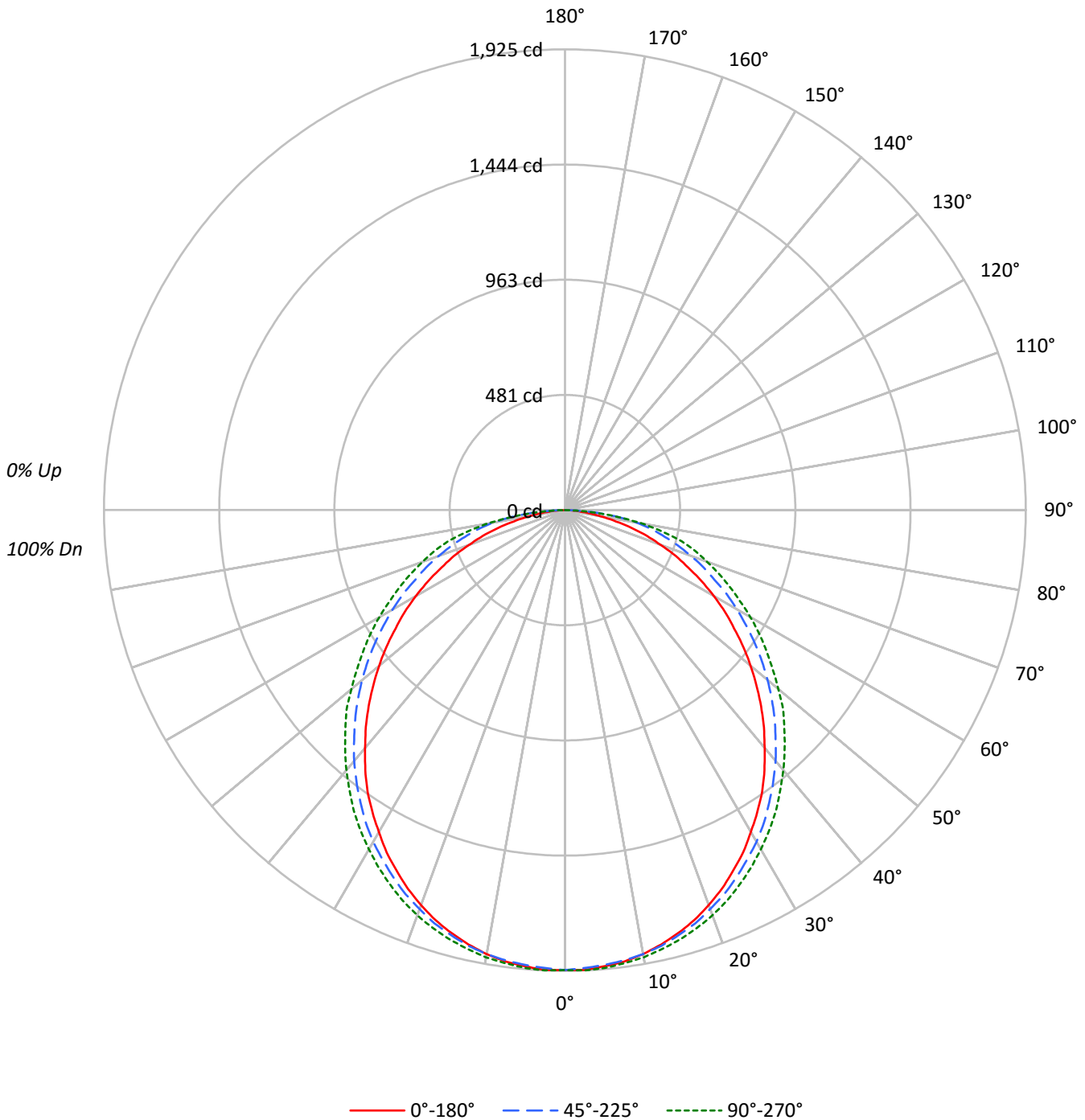
Input Watts (W): 44.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	2585	2585	2585
5°	2584	2577	2593
10°	2573	2573	2592
15°	2549	2561	2587
20°	2515	2540	2580
25°	2469	2515	2564
30°	2413	2486	2543
35°	2360	2446	2523
40°	2280	2405	2493
45°	2205	2357	2466
50°	2120	2313	2437
55°	2026	2270	2413
60°	1931	2235	2408
65°	1809	2196	2423
70°	1675	2208	2488
75°	1499	2249	2628
80°	1212	2383	2572
85°	912	2092	2038



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	181.9	3.3
10°-20°	519.8	9.5
20°-30°	781.4	14.3
30°-40°	930.8	17.0
40°-50°	952.6	17.4
50°-60°	857.6	15.7
60°-70°	673.5	12.3
70°-80°	437.1	8.0
80°-90°	135.2	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°	1483.1	27.1
0°-40°	2413.9	44.1
0°-60°	4224.2	77.2
0°-90°	5470.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5470.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1922	1922	1922	1922	1922	
5°	1913	1916	1908	1918	1920	182
15°	1830	1835	1838	1854	1857	516
25°	1663	1677	1694	1722	1727	766
35°	1437	1454	1489	1526	1536	896
45°	1159	1187	1239	1286	1296	893
55°	864	902	968	1018	1029	774
65°	568	612	690	747	761	566
75°	288	344	433	492	506	305
85°	59	110	136	132	132	71
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1921.6	1921.6	1921.6	1921.6	1921.6
2.5°	1923.4	1923.4	1914.7	1923.4	1925.1
5°	1913.0	1916.4	1907.7	1918.2	1919.9
7.5°	1902.5	1902.5	1897.3	1907.7	1909.5
10°	1883.4	1885.2	1883.4	1895.6	1897.3
12.5°	1859.1	1862.6	1864.3	1876.5	1878.2
15°	1829.6	1834.8	1838.2	1853.9	1857.4
17.5°	1796.5	1801.8	1810.4	1827.8	1831.3
20°	1756.6	1763.5	1774.0	1796.5	1801.8
22.5°	1713.1	1720.1	1737.5	1758.3	1767.0
25°	1662.8	1676.7	1694.0	1721.8	1727.0
27.5°	1612.4	1624.5	1647.1	1676.7	1683.6
30°	1553.3	1572.4	1600.2	1629.8	1636.7
32.5°	1496.0	1515.1	1548.1	1579.4	1588.1
35°	1436.9	1454.3	1489.0	1525.5	1535.9
37.5°	1369.1	1391.7	1429.9	1466.4	1476.9
40°	1297.9	1325.7	1369.1	1407.4	1419.5
42.5°	1230.1	1259.7	1303.1	1344.8	1358.7
45°	1158.9	1186.7	1238.8	1285.7	1296.2
47.5°	1085.9	1117.2	1172.8	1219.7	1237.1
50°	1012.9	1046.0	1105.0	1153.7	1164.1
52.5°	940.0	974.7	1037.3	1089.4	1094.6
55°	863.5	901.7	967.8	1018.2	1028.6
57.5°	794.0	827.0	898.3	950.4	962.6
60°	717.6	754.1	830.5	879.2	894.8
62.5°	644.6	682.8	762.8	811.4	825.3
65°	568.2	611.6	689.8	747.1	761.0
67.5°	502.1	543.8	627.2	682.8	696.7
70°	425.7	472.6	561.2	618.5	632.4
72.5°	359.7	408.3	496.9	552.5	573.4
75°	288.4	344.0	432.6	491.7	505.6
77.5°	218.9	283.2	373.6	418.7	418.7
80°	156.4	224.1	307.5	328.4	331.9
82.5°	102.5	168.5	227.6	225.9	225.9
85°	59.1	109.5	135.5	132.0	132.0
87.5°	22.6	45.2	48.6	48.6	46.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)