

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: P314422

Luminaire Tested: **24FCZ2-55HE-UNV-L83050-S-CA125-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: P314422
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-CA125-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" ACRYLIC 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: 5578.0 lumens
Efficiency: N/A
Efficacy: 126.5 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

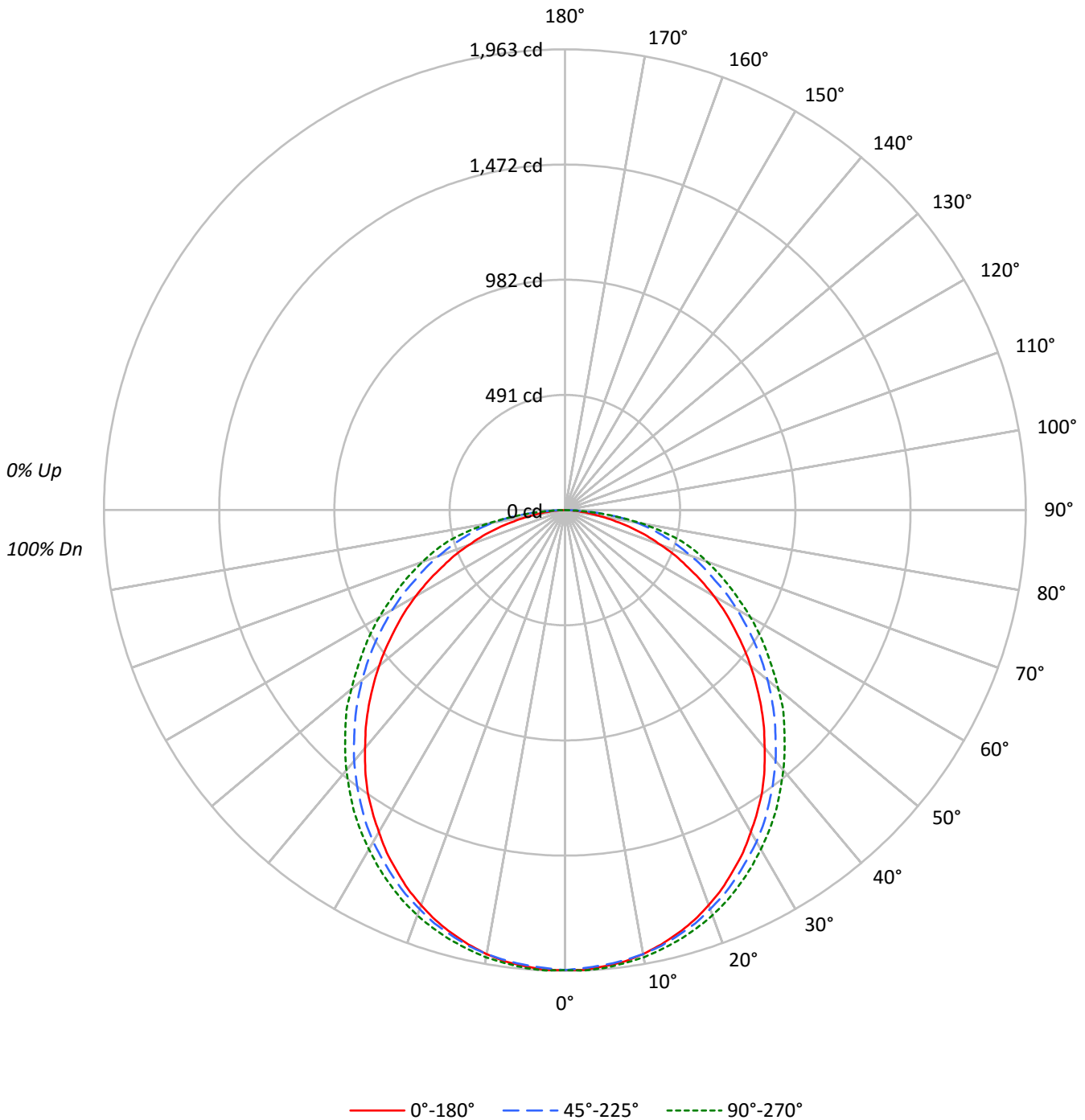
Input Watts (W): 44.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2637	2637	2637
5°	2635	2628	2644
10°	2624	2624	2643
15°	2599	2611	2638
20°	2565	2590	2631
25°	2517	2565	2614
30°	2461	2535	2593
35°	2407	2494	2573
40°	2325	2452	2542
45°	2249	2404	2515
50°	2162	2359	2485
55°	2066	2315	2460
60°	1969	2279	2456
65°	1845	2239	2471
70°	1708	2251	2537
75°	1529	2294	2680
80°	1236	2430	2622
85°	929	2133	2079



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	185.5	3.3
10°-20°	530.1	9.5
20°-30°	796.8	14.3
30°-40°	949.2	17.0
40°-50°	971.4	17.4
50°-60°	874.6	15.7
60°-70°	686.8	12.3
70°-80°	445.8	8.0
80°-90°	137.9	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°	1512.4	27.1
0°-40°	2461.6	44.1
0°-60°	4307.6	77.2
0°-90°	5578.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5578.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1960	1960	1960	1960	1960	
5°	1951	1954	1945	1956	1958	185
15°	1866	1871	1874	1890	1894	526
25°	1696	1710	1728	1756	1761	781
35°	1465	1483	1518	1556	1566	914
45°	1182	1210	1263	1311	1322	911
55°	881	920	987	1038	1049	789
65°	579	624	703	762	776	577
75°	294	351	441	501	516	311
85°	60	112	138	135	135	73
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1959.6	1959.6	1959.6	1959.6	1959.6
2.5°	1961.4	1961.4	1952.5	1961.4	1963.1
5°	1950.7	1954.3	1945.4	1956.0	1957.8
7.5°	1940.1	1940.1	1934.8	1945.4	1947.2
10°	1920.6	1922.4	1920.6	1933.0	1934.8
12.5°	1895.8	1899.3	1901.1	1913.5	1915.3
15°	1865.7	1871.0	1874.5	1890.5	1894.0
17.5°	1832.0	1837.3	1846.2	1863.9	1867.5
20°	1791.3	1798.4	1809.0	1832.0	1837.3
22.5°	1747.0	1754.1	1771.8	1793.0	1801.9
25°	1695.6	1709.8	1727.5	1755.8	1761.1
27.5°	1644.2	1656.6	1679.6	1709.8	1716.9
30°	1584.0	1603.5	1631.8	1661.9	1669.0
32.5°	1525.5	1545.0	1578.7	1610.5	1619.4
35°	1465.3	1483.0	1518.4	1555.6	1566.3
37.5°	1396.2	1419.2	1458.2	1495.4	1506.0
40°	1323.5	1351.9	1396.2	1435.1	1447.5
42.5°	1254.4	1284.5	1328.8	1371.4	1385.5
45°	1181.8	1210.1	1263.3	1311.1	1321.7
47.5°	1107.4	1139.3	1196.0	1243.8	1261.5
50°	1032.9	1066.6	1126.9	1176.5	1187.1
52.5°	958.5	994.0	1057.8	1110.9	1116.2
55°	880.6	919.6	986.9	1038.3	1048.9
57.5°	809.7	843.4	916.0	969.2	981.6
60°	731.7	769.0	846.9	896.5	912.5
62.5°	657.3	696.3	777.8	827.4	841.6
65°	579.4	623.7	703.4	761.9	776.0
67.5°	512.0	554.6	639.6	696.3	710.5
70°	434.1	481.9	572.3	630.8	644.9
72.5°	366.8	416.4	506.7	563.4	584.7
75°	294.1	350.8	441.2	501.4	515.6
77.5°	223.2	288.8	380.9	427.0	427.0
80°	159.5	228.6	313.6	334.9	338.4
82.5°	104.5	171.9	232.1	230.3	230.3
85°	60.2	111.6	138.2	134.7	134.7
87.5°	23.0	46.1	49.6	49.6	47.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)