

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: P314417

Luminaire Tested: **24FCZ2-55HE-UNV-L83050-S-CA08-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: P314417
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-CA08-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.08" 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: 5598.0 lumens
Efficiency: N/A
Efficacy: 126.9 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

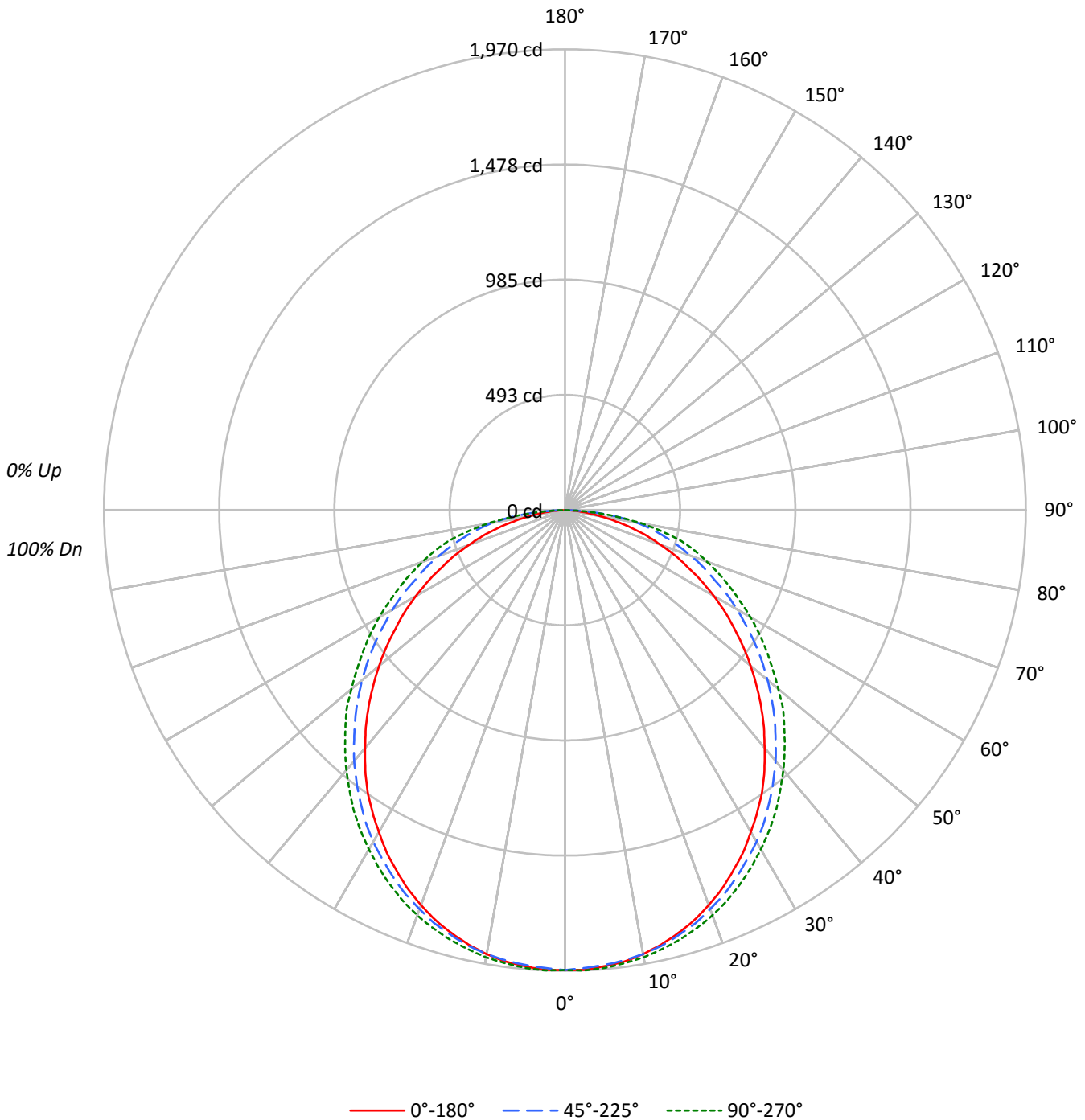
Input Watts (W): 44.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2646	2646	2646
5°	2644	2637	2654
10°	2633	2633	2653
15°	2608	2621	2648
20°	2574	2600	2640
25°	2526	2574	2624
30°	2470	2544	2602
35°	2415	2503	2582
40°	2333	2461	2552
45°	2257	2412	2524
50°	2170	2367	2494
55°	2073	2323	2469
60°	1976	2287	2464
65°	1851	2247	2479
70°	1714	2259	2546
75°	1535	2302	2690
80°	1240	2438	2631
85°	934	2141	2086



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	186.2	3.3
10°-20°	532.0	9.5
20°-30°	799.7	14.3
30°-40°	952.6	17.0
40°-50°	974.9	17.4
50°-60°	877.7	15.7
60°-70°	689.3	12.3
70°-80°	447.3	8.0
80°-90°	138.4	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°	1517.9	27.1
0°-40°	2470.4	44.1
0°-60°	4323.0	77.2
0°-90°	5598.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5598.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1967	1967	1967	1967	1967	
5°	1958	1961	1952	1963	1965	186
15°	1872	1878	1881	1897	1901	528
25°	1702	1716	1734	1762	1768	784
35°	1470	1488	1524	1561	1572	917
45°	1186	1214	1268	1316	1326	914
55°	884	923	990	1042	1053	792
65°	581	626	706	765	779	579
75°	295	352	443	503	517	312
85°	60	112	139	135	135	73
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1966.6	1966.6	1966.6	1966.6	1966.6
2.5°	1968.4	1968.4	1959.5	1968.4	1970.2
5°	1957.7	1961.3	1952.4	1963.1	1964.8
7.5°	1947.1	1947.1	1941.7	1952.4	1954.2
10°	1927.5	1929.3	1927.5	1939.9	1941.7
12.5°	1902.6	1906.2	1907.9	1920.4	1922.2
15°	1872.4	1877.7	1881.3	1897.3	1900.8
17.5°	1838.6	1843.9	1852.8	1870.6	1874.2
20°	1797.7	1804.8	1815.5	1838.6	1843.9
22.5°	1753.2	1760.4	1778.1	1799.5	1808.4
25°	1701.7	1715.9	1733.7	1762.1	1767.5
27.5°	1650.1	1662.6	1685.7	1715.9	1723.0
30°	1589.6	1609.2	1637.7	1667.9	1675.0
32.5°	1531.0	1550.5	1584.3	1616.3	1625.2
35°	1470.5	1488.3	1523.9	1561.2	1571.9
37.5°	1401.2	1424.3	1463.4	1500.7	1511.4
40°	1328.3	1356.7	1401.2	1440.3	1452.7
42.5°	1258.9	1289.1	1333.6	1376.3	1390.5
45°	1186.0	1214.5	1267.8	1315.8	1326.5
47.5°	1111.3	1143.3	1200.2	1248.2	1266.0
50°	1036.7	1070.4	1130.9	1180.7	1191.3
52.5°	962.0	997.5	1061.5	1114.9	1120.2
55°	883.7	922.9	990.4	1042.0	1052.7
57.5°	812.6	846.4	919.3	972.6	985.1
60°	734.4	771.7	849.9	899.7	915.7
62.5°	659.7	698.8	780.6	830.4	844.6
65°	581.4	625.9	705.9	764.6	778.8
67.5°	513.9	556.6	641.9	698.8	713.0
70°	435.6	483.7	574.3	633.0	647.2
72.5°	368.1	417.9	508.5	565.4	586.8
75°	295.2	352.1	442.8	503.2	517.4
77.5°	224.0	289.8	382.3	428.5	428.5
80°	160.0	229.4	314.7	336.1	339.6
82.5°	104.9	172.5	232.9	231.2	231.2
85°	60.5	112.0	138.7	135.1	135.1
87.5°	23.1	46.2	49.8	49.8	48.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)