

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: P311621

Luminaire Tested: **24FCZ2-55HE-UNV-L82765-S-CA08-W2A-U-5500K**

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: P311621
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-L82765-S-CA08-W2A-U-5500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.08" ACRYLIC SHEET
Light Source: (336) 5500K 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: 5544.0 lumens
Efficiency: N/A
Efficacy: 125.1 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

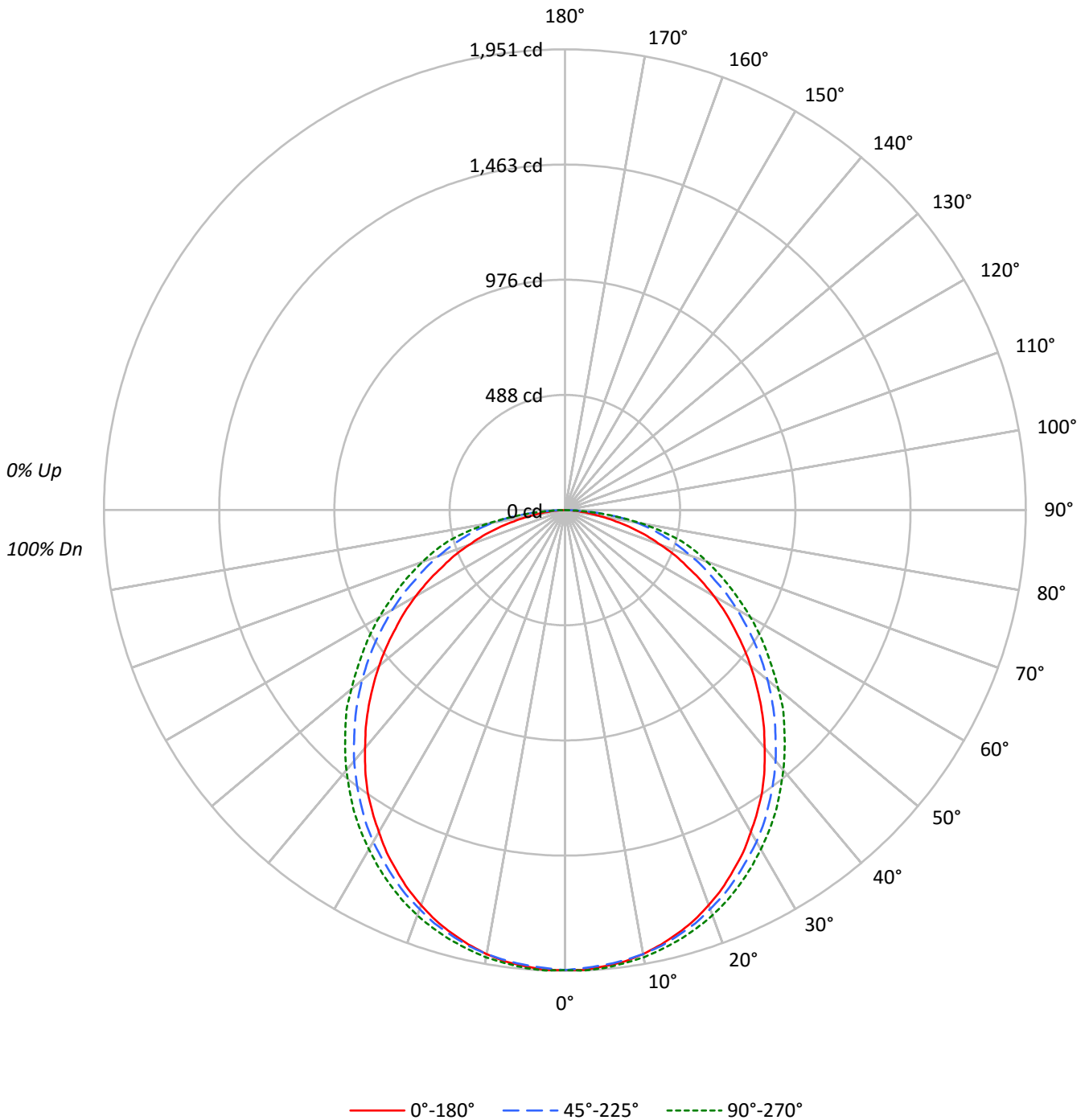
Input Watts (W): 44.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2620	2620	2620
5°	2619	2612	2628
10°	2608	2608	2627
15°	2583	2595	2622
20°	2549	2574	2615
25°	2502	2549	2599
30°	2446	2520	2577
35°	2392	2479	2557
40°	2311	2437	2527
45°	2235	2389	2500
50°	2149	2344	2470
55°	2053	2301	2445
60°	1957	2265	2440
65°	1833	2226	2456
70°	1697	2238	2522
75°	1520	2280	2664
80°	1228	2415	2606
85°	925	2121	2066



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	184.4	3.3
10°-20°	526.9	9.5
20°-30°	792.0	14.3
30°-40°	943.4	17.0
40°-50°	965.5	17.4
50°-60°	869.2	15.7
60°-70°	682.6	12.3
70°-80°	443.0	8.0
80°-90°	137.0	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°	1503.2	27.1
0°-40°	2446.6	44.1
0°-60°	4281.3	77.2
0°-90°	5544.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5544.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1948	1948	1948	1948	1948	
5°	1939	1942	1934	1944	1946	184
15°	1854	1860	1863	1879	1882	523
25°	1685	1699	1717	1745	1750	776
35°	1456	1474	1509	1546	1557	909
45°	1175	1203	1256	1303	1314	906
55°	875	914	981	1032	1042	785
65°	576	620	699	757	771	573
75°	292	349	438	498	512	309
85°	60	111	137	134	134	72
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1947.6	1947.6	1947.6	1947.6	1947.6
2.5°	1949.4	1949.4	1940.6	1949.4	1951.2
5°	1938.8	1942.4	1933.6	1944.1	1945.9
7.5°	1928.3	1928.3	1923.0	1933.6	1935.3
10°	1908.9	1910.7	1908.9	1921.2	1923.0
12.5°	1884.2	1887.8	1889.5	1901.9	1903.6
15°	1854.3	1859.6	1863.1	1879.0	1882.5
17.5°	1820.9	1826.1	1834.9	1852.6	1856.1
20°	1780.4	1787.4	1798.0	1820.9	1826.1
22.5°	1736.3	1743.4	1761.0	1782.1	1790.9
25°	1685.3	1699.3	1717.0	1745.1	1750.4
27.5°	1634.2	1646.5	1669.4	1699.3	1706.4
30°	1574.3	1593.7	1621.9	1651.8	1658.8
32.5°	1516.2	1535.6	1569.0	1600.7	1609.5
35°	1456.3	1473.9	1509.2	1546.1	1556.7
37.5°	1387.7	1410.5	1449.3	1486.3	1496.8
40°	1315.5	1343.6	1387.7	1426.4	1438.7
42.5°	1246.8	1276.7	1320.7	1363.0	1377.1
45°	1174.6	1202.7	1255.6	1303.1	1313.7
47.5°	1100.6	1132.3	1188.7	1236.2	1253.8
50°	1026.7	1060.1	1120.0	1169.3	1179.9
52.5°	952.7	987.9	1051.3	1104.1	1109.4
55°	875.2	913.9	980.9	1031.9	1042.5
57.5°	804.8	838.2	910.4	963.3	975.6
60°	727.3	764.3	841.7	891.1	906.9
62.5°	653.3	692.1	773.1	822.4	836.5
65°	575.8	619.9	699.1	757.2	771.3
67.5°	508.9	551.2	635.7	692.1	706.2
70°	431.4	479.0	568.8	626.9	641.0
72.5°	364.5	413.8	503.6	560.0	581.1
75°	292.3	348.7	438.5	498.4	512.4
77.5°	221.9	287.0	378.6	424.4	424.4
80°	158.5	227.2	311.7	332.8	336.3
82.5°	103.9	170.8	230.7	228.9	228.9
85°	59.9	110.9	137.4	133.8	133.8
87.5°	22.9	45.8	49.3	49.3	47.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)