

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: P314423

Luminaire Tested: **24FCZ2-55HE-UNV-L83050-S-CA125-W2A-U-4500K**

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: P314423
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-4500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" ACRYLIC SHEET
Light Source: (336) 4500K 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: 5631.0 lumens
Efficiency: N/A
Efficacy: 124.6 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

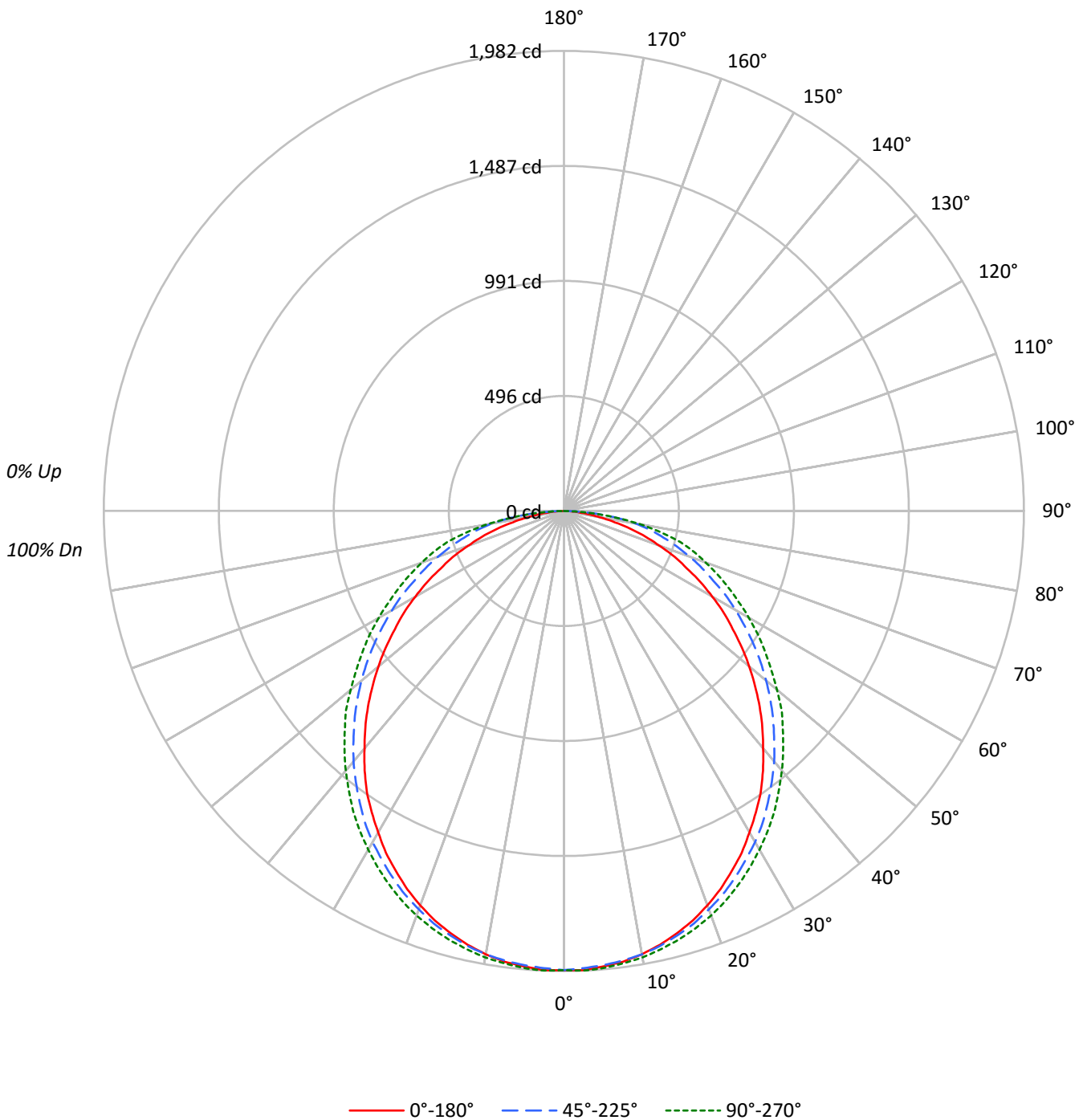
Input Watts (W): 45.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	2662	2662	2662
5°	2660	2653	2669
10°	2649	2649	2669
15°	2623	2636	2663
20°	2589	2615	2656
25°	2541	2589	2639
30°	2484	2559	2618
35°	2430	2518	2597
40°	2347	2475	2567
45°	2270	2427	2539
50°	2183	2381	2509
55°	2085	2337	2484
60°	1988	2301	2479
65°	1862	2261	2494
70°	1724	2273	2561
75°	1543	2315	2706
80°	1247	2453	2647
85°	939	2154	2098



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	187.3	3.3
10°-20°	535.1	9.5
20°-30°	804.4	14.3
30°-40°	958.2	17.0
40°-50°	980.6	17.4
50°-60°	882.9	15.7
60°-70°	693.3	12.3
70°-80°	450.0	8.0
80°-90°	139.2	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°	1526.8	27.1
0°-40°	2485.0	44.1
0°-60°	4348.5	77.2
0°-90°	5631.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5631.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1978	1978	1978	1978	1978	
5°	1969	1973	1964	1975	1976	187
15°	1883	1889	1892	1908	1912	531
25°	1712	1726	1744	1772	1778	789
35°	1479	1497	1533	1570	1581	923
45°	1193	1222	1275	1324	1334	920
55°	889	928	996	1048	1059	797
65°	585	630	710	769	783	582
75°	297	354	445	506	520	314
85°	61	113	140	136	136	73
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1978.2	1978.2	1978.2	1978.2	1978.2
2.5°	1980.0	1980.0	1971.1	1980.0	1981.8
5°	1969.3	1972.8	1963.9	1974.6	1976.4
7.5°	1958.5	1958.5	1953.2	1963.9	1965.7
10°	1938.9	1940.6	1938.9	1951.4	1953.2
12.5°	1913.8	1917.4	1919.2	1931.7	1933.5
15°	1883.4	1888.8	1892.4	1908.5	1912.0
17.5°	1849.4	1854.8	1863.7	1881.6	1885.2
20°	1808.3	1815.4	1826.2	1849.4	1854.8
22.5°	1763.6	1770.7	1788.6	1810.1	1819.0
25°	1711.7	1726.0	1743.9	1772.5	1777.9
27.5°	1659.8	1672.4	1695.6	1726.0	1733.2
30°	1599.0	1618.7	1647.3	1677.7	1684.9
32.5°	1540.0	1559.7	1593.7	1625.9	1634.8
35°	1479.2	1497.1	1532.8	1570.4	1581.1
37.5°	1409.4	1432.7	1472.0	1509.6	1520.3
40°	1336.1	1364.7	1409.4	1448.8	1461.3
42.5°	1266.3	1296.7	1341.5	1384.4	1398.7
45°	1193.0	1221.6	1275.3	1323.6	1334.3
47.5°	1117.9	1150.1	1207.3	1255.6	1273.5
50°	1042.8	1076.7	1137.6	1187.6	1198.4
52.5°	967.6	1003.4	1067.8	1121.5	1126.8
55°	888.9	928.3	996.3	1048.1	1058.9
57.5°	817.4	851.4	924.7	978.4	990.9
60°	738.7	776.3	855.0	905.0	921.1
62.5°	663.6	702.9	785.2	835.3	849.6
65°	584.9	629.6	710.1	769.1	783.4
67.5°	516.9	559.8	645.7	702.9	717.2
70°	438.2	486.5	577.7	636.7	651.1
72.5°	370.2	420.3	511.5	568.8	590.2
75°	296.9	354.1	445.4	506.2	520.5
77.5°	225.4	291.5	384.6	431.1	431.1
80°	161.0	230.7	316.6	338.0	341.6
82.5°	105.5	173.5	234.3	232.5	232.5
85°	60.8	112.7	139.5	135.9	135.9
87.5°	23.3	46.5	50.1	50.1	48.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)