

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: P314475

Luminaire Tested: **24FCZ2-65HE-UNV-L83050-S-CP125-W2A-U-3000K**

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: P314475
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: 24FCZ2-65HE-UNV-L83050-S-CP125-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB SHEET
Light Source: (336) 3000K 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: 5797.0 lumens
Efficiency: N/A
Efficacy: 110.4 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

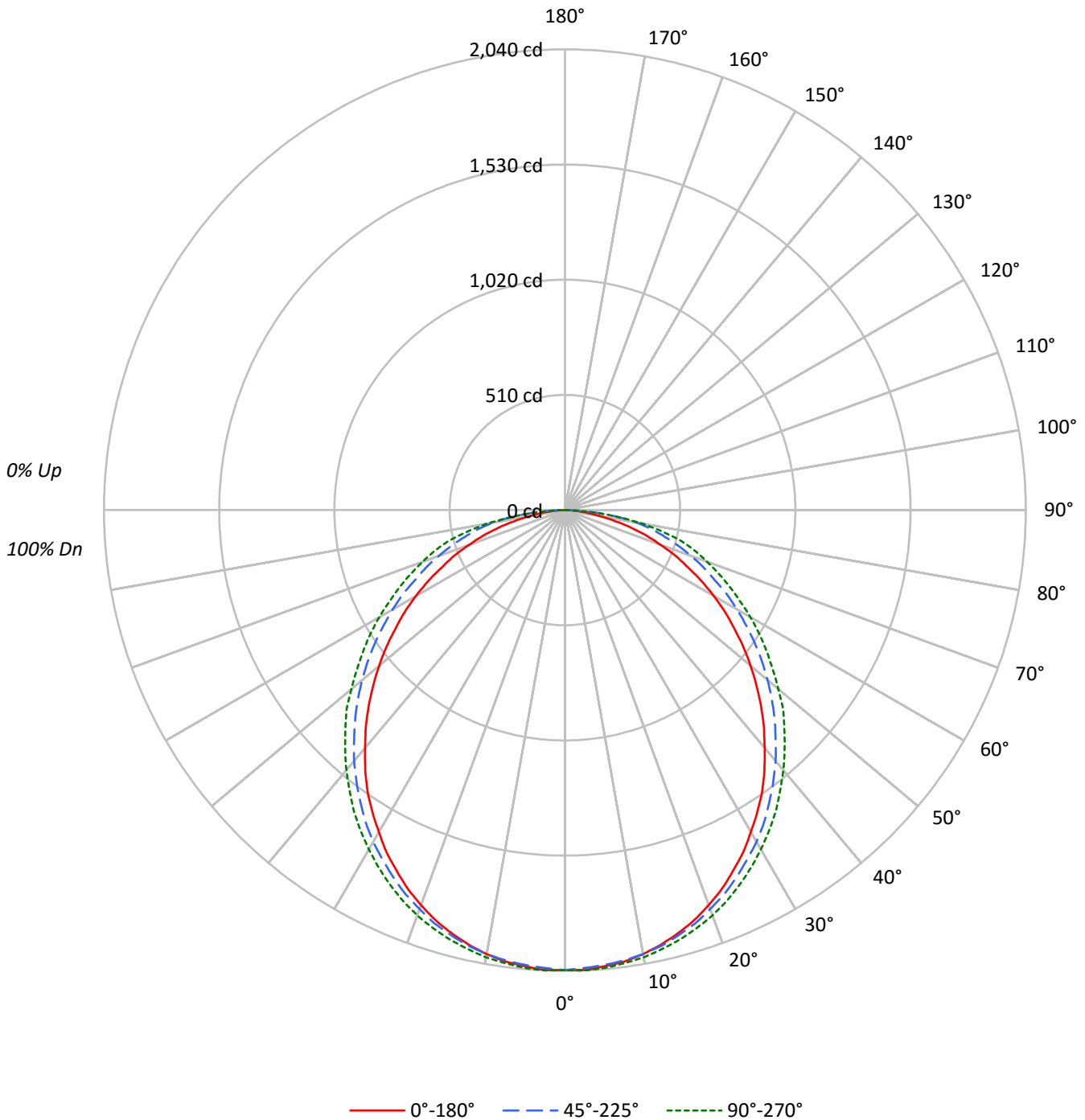
Input Watts (W): 52.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2740	2740	2740
5°	2738	2731	2748
10°	2727	2727	2747
15°	2701	2714	2742
20°	2666	2692	2734
25°	2616	2665	2717
30°	2558	2635	2695
35°	2501	2592	2674
40°	2416	2549	2642
45°	2337	2498	2614
50°	2247	2451	2582
55°	2147	2406	2557
60°	2046	2369	2552
65°	1917	2327	2568
70°	1775	2340	2637
75°	1589	2384	2785
80°	1284	2525	2725
85°	966	2217	2160



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	192.8	3.3
10°-20°	550.9	9.5
20°-30°	828.1	14.3
30°-40°	986.4	17.0
40°-50°	1009.6	17.4
50°-60°	908.9	15.7
60°-70°	713.8	12.3
70°-80°	463.2	8.0
80°-90°	143.3	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°	1571.8	27.1
0°-40°	2558.2	44.1
0°-60°	4476.7	77.2
0°-90°	5797.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5797.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2036	2036	2036	2036	2036	
5°	2027	2031	2022	2033	2035	193
15°	1939	1944	1948	1965	1968	547
25°	1762	1777	1795	1825	1830	812
35°	1523	1541	1578	1617	1628	950
45°	1228	1258	1313	1363	1374	947
55°	915	956	1026	1079	1090	820
65°	602	648	731	792	806	599
75°	306	365	458	521	536	323
85°	63	116	144	140	140	76
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2036.5	2036.5	2036.5	2036.5	2036.5
2.5°	2038.4	2038.4	2029.2	2038.4	2040.2
5°	2027.3	2031.0	2021.8	2032.8	2034.7
7.5°	2016.3	2016.3	2010.7	2021.8	2023.6
10°	1996.0	1997.9	1996.0	2008.9	2010.7
12.5°	1970.2	1973.9	1975.8	1988.6	1990.5
15°	1938.9	1944.5	1948.1	1964.7	1968.4
17.5°	1903.9	1909.5	1918.7	1937.1	1940.8
20°	1861.6	1869.0	1880.0	1903.9	1909.5
22.5°	1815.6	1822.9	1841.3	1863.4	1872.6
25°	1762.2	1776.9	1795.3	1824.8	1830.3
27.5°	1708.8	1721.7	1745.6	1776.9	1784.3
30°	1646.2	1666.4	1695.9	1727.2	1734.5
32.5°	1585.4	1605.7	1640.6	1673.8	1683.0
35°	1522.8	1541.2	1578.0	1616.7	1627.7
37.5°	1451.0	1474.9	1515.4	1554.1	1565.1
40°	1375.5	1404.9	1451.0	1491.5	1504.4
42.5°	1303.7	1335.0	1381.0	1425.2	1439.9
45°	1228.2	1257.6	1312.9	1362.6	1373.6
47.5°	1150.8	1184.0	1242.9	1292.6	1311.0
50°	1073.5	1108.5	1171.1	1222.7	1233.7
52.5°	996.2	1033.0	1099.3	1154.5	1160.0
55°	915.1	955.7	1025.6	1079.0	1090.1
57.5°	841.5	876.5	952.0	1007.2	1020.1
60°	760.5	799.1	880.2	931.7	948.3
62.5°	683.1	723.6	808.3	859.9	874.6
65°	602.1	648.2	731.0	791.8	806.5
67.5°	532.1	576.3	664.7	723.6	738.4
70°	451.1	500.8	594.8	655.5	670.2
72.5°	381.2	432.7	526.6	585.5	607.6
75°	305.7	364.6	458.5	521.1	535.8
77.5°	232.0	300.1	395.9	443.8	443.8
80°	165.7	237.5	325.9	348.0	351.7
82.5°	108.6	178.6	241.2	239.4	239.4
85°	62.6	116.0	143.6	139.9	139.9
87.5°	23.9	47.9	51.6	51.6	49.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)