

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: P311044

Luminaire Tested: **24FCZ2-65HE-UNV-L82765-CA125-W2A-U-5000K**

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: P311044
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-15)
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-L82765-CA125-W2A-U-5000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" ACRYLIC SHEET
Light Source: (336) 5000K 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: 6131.0 lumens
Efficiency: N/A
Efficacy: 114.0 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

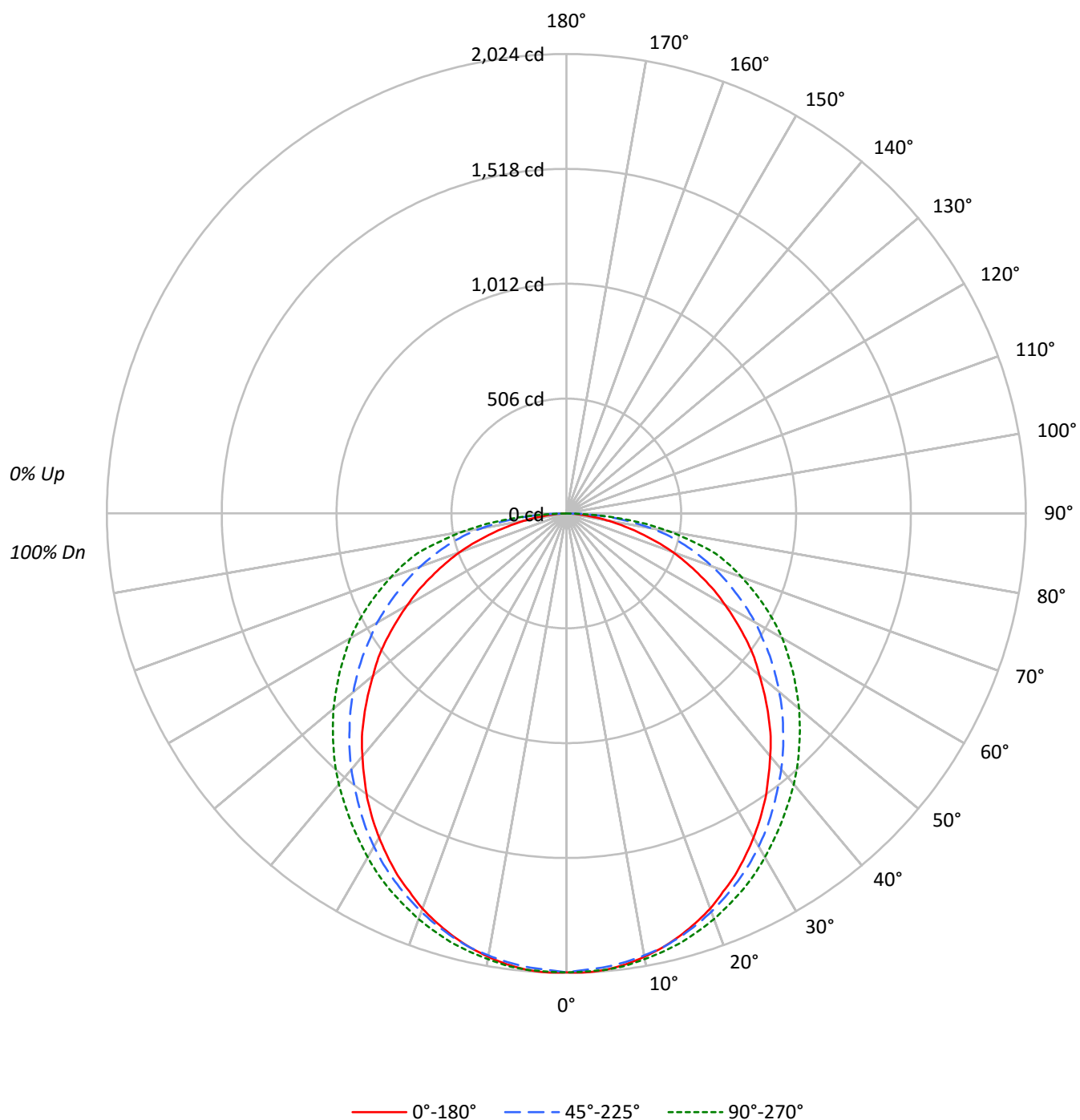
Input Watts (W): 53.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				0
RW	70	50	30	10	70	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		100
1	108	103	98	94	105	100	96	92	96	92	89		92	89	87		82
2	98	89	81	75	95	87	80	74	83	78	73		80	75	71		67
3	89	77	69	62	86	76	68	61	73	66	60		70	64	59		56
4	81	68	59	52	79	67	58	52	64	57	51		62	56	50		47
5	74	61	52	45	72	60	51	44	58	50	44		56	49	43		41
6	69	55	46	39	67	54	45	39	52	44	38		50	43	38		36
7	64	50	41	34	62	49	40	34	47	39	34		46	39	34		31
8	59	45	37	31	57	45	36	30	43	36	30		42	35	30		28
9	55	41	33	27	54	41	33	27	40	32	27		39	32	27		25
10	52	38	30	25	50	38	30	25	37	30	25		36	29	25		23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2721	2721	2721
5°	2725	2709	2725
10°	2710	2701	2724
15°	2686	2692	2726
20°	2653	2674	2723
25°	2612	2654	2721
30°	2563	2633	2718
35°	2513	2606	2720
40°	2455	2587	2737
45°	2396	2570	2760
50°	2325	2563	2802
55°	2267	2567	2858
60°	2179	2589	2956
65°	2079	2616	3063
70°	1969	2697	3233
75°	1756	2813	3532
80°	1497	2979	3609
85°	1068	2952	3455



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	191.4	3.1
10°-20°	547.2	8.9
20°-30°	826.4	13.5
30°-40°	996.0	16.2
40°-50°	1045.7	17.1
50°-60°	978.3	16.0
60°-70°	807.9	13.2
70°-80°	550.5	9.0
80°-90°	187.7	3.1
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°	1564.9	25.5
0°-40°	2561.0	41.8
0°-60°	4584.9	74.8
0°-90°	6131.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6131.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2022	2022	2022	2022	2022	
5°	2018	2016	2006	2018	2018	191
15°	1928	1930	1932	1953	1957	544
25°	1760	1768	1788	1823	1833	810
35°	1530	1546	1587	1640	1656	956
45°	1259	1286	1351	1424	1450	971
55°	966	1005	1094	1184	1218	862
65°	653	708	822	926	962	648
75°	338	415	541	643	679	360
85°	69	136	191	216	224	87
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2022.0	2022.0	2022.0	2022.0	2022.0
2.5°	2024.0	2022.0	2011.8	2022.0	2019.9
5°	2017.9	2015.8	2005.7	2017.9	2017.9
7.5°	2003.6	2003.6	1993.5	2007.7	2009.7
10°	1983.3	1983.3	1977.2	1993.5	1993.5
12.5°	1958.9	1958.9	1958.9	1975.2	1977.2
15°	1928.4	1930.4	1932.4	1952.8	1956.9
17.5°	1891.8	1895.8	1901.9	1926.3	1930.4
20°	1853.1	1857.2	1867.4	1895.8	1901.9
22.5°	1804.3	1814.5	1828.7	1861.3	1867.4
25°	1759.5	1767.7	1788.0	1822.6	1832.8
27.5°	1704.6	1716.8	1743.3	1779.9	1794.1
30°	1649.7	1661.9	1694.5	1737.2	1749.4
32.5°	1590.7	1609.0	1643.6	1688.3	1702.6
35°	1529.7	1546.0	1586.6	1639.5	1655.8
37.5°	1462.6	1484.9	1529.7	1586.6	1607.0
40°	1397.5	1421.9	1472.7	1533.8	1558.2
42.5°	1332.4	1356.8	1413.7	1482.9	1507.3
45°	1259.1	1285.6	1350.7	1423.9	1450.4
47.5°	1185.9	1218.5	1289.7	1367.0	1395.4
50°	1110.6	1147.3	1224.6	1305.9	1338.5
52.5°	1043.5	1078.1	1159.5	1246.9	1277.4
55°	966.2	1004.9	1094.4	1183.9	1218.5
57.5°	886.9	929.6	1025.2	1122.9	1157.4
60°	809.6	856.4	962.2	1059.8	1098.4
62.5°	734.3	781.1	891.0	992.7	1031.3
65°	653.0	707.9	821.8	925.5	962.2
67.5°	575.7	634.7	754.7	856.4	893.0
70°	500.4	557.4	685.5	785.2	821.8
72.5°	419.0	484.1	612.3	716.0	754.7
75°	337.7	415.0	541.1	642.8	679.4
77.5°	262.4	341.7	467.9	551.3	569.6
80°	193.2	274.6	384.5	443.4	465.8
82.5°	124.1	205.4	292.9	335.6	353.9
85°	69.2	136.3	191.2	215.6	223.8
87.5°	28.5	59.0	77.3	87.5	87.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)