

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: P314091

Luminaire Tested: **24FCZ2-65HE-UNV-L83050-CA08-W2A-U-3500K**

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: P314091
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-L83050-CA08-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.08" ACRYLIC SHEET
Light Source: (336) 3500K 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: 5976.0 lumens
Efficiency: N/A
Efficacy: 113.6 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

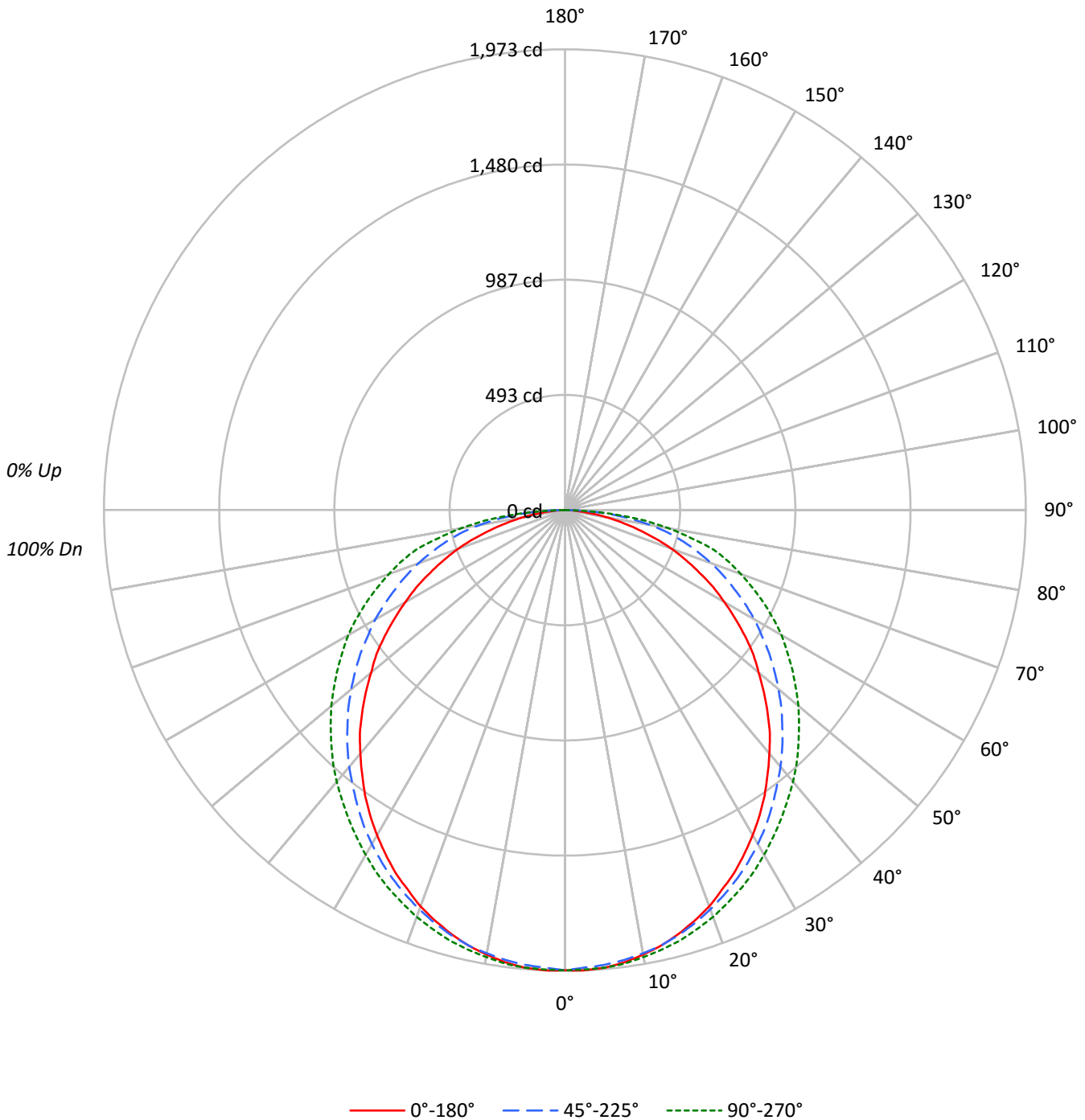
Input Watts (W): 52.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				100
1	108	103	98	94	105	100	96	92	96	92	89	92	89	87	88	86	84	82				82
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67				67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56				56
4	81	68	59	52	79	67	58	52	64	57	51	62	56	50	60	54	50	47				47
5	74	61	52	45	72	60	51	44	58	50	44	56	49	43	54	48	43	41				41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36				36
7	64	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31				31
8	59	45	37	31	57	45	36	30	43	36	30	42	35	30	41	34	30	28				28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25				25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23				23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2652	2652	2652
5°	2657	2640	2657
10°	2641	2633	2655
15°	2618	2624	2657
20°	2586	2606	2654
25°	2546	2587	2652
30°	2498	2566	2649
35°	2449	2540	2651
40°	2392	2521	2668
45°	2335	2505	2690
50°	2266	2498	2731
55°	2209	2502	2786
60°	2123	2524	2881
65°	2026	2550	2986
70°	1919	2629	3151
75°	1711	2742	3442
80°	1460	2903	3518
85°	1041	2878	3367



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	186.5	3.1
10°-20°	533.3	8.9
20°-30°	805.5	13.5
30°-40°	970.8	16.2
40°-50°	1019.2	17.1
50°-60°	953.5	16.0
60°-70°	787.4	13.2
70°-80°	536.6	9.0
80°-90°	183.0	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°	1525.4	25.5
0°-40°	2496.2	41.8
0°-60°	4469.0	74.8
0°-90°	5976.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5976.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1971	1971	1971	1971	1971	
5°	1967	1965	1955	1967	1967	187
15°	1880	1882	1884	1903	1907	530
25°	1715	1723	1743	1776	1786	789
35°	1491	1507	1546	1598	1614	932
45°	1227	1253	1316	1388	1414	947
55°	942	980	1067	1154	1188	841
65°	636	690	801	902	938	631
75°	329	404	527	626	662	351
85°	67	133	186	210	218	84
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1970.8	1970.8	1970.8	1970.8	1970.8
2.5°	1972.8	1970.8	1960.9	1970.8	1968.9
5°	1966.9	1964.9	1955.0	1966.9	1966.9
7.5°	1953.0	1953.0	1943.1	1957.0	1958.9
10°	1933.2	1933.2	1927.2	1943.1	1943.1
12.5°	1909.4	1909.4	1909.4	1925.2	1927.2
15°	1879.6	1881.6	1883.6	1903.4	1907.4
17.5°	1843.9	1847.9	1853.9	1877.6	1881.6
20°	1806.3	1810.2	1820.1	1847.9	1853.9
22.5°	1758.7	1768.6	1782.5	1814.2	1820.1
25°	1715.1	1723.0	1742.8	1776.5	1786.4
27.5°	1661.5	1673.4	1699.2	1734.9	1748.8
30°	1608.0	1619.9	1651.6	1693.3	1705.1
32.5°	1550.5	1568.3	1602.0	1645.7	1659.5
35°	1491.0	1506.9	1546.5	1598.1	1613.9
37.5°	1425.6	1447.4	1491.0	1546.5	1566.4
40°	1362.1	1385.9	1435.5	1495.0	1518.8
42.5°	1298.7	1322.5	1378.0	1445.4	1469.2
45°	1227.3	1253.1	1316.5	1387.9	1413.7
47.5°	1155.9	1187.7	1257.1	1332.4	1360.2
50°	1082.6	1118.3	1193.6	1272.9	1304.6
52.5°	1017.1	1050.8	1130.2	1215.4	1245.2
55°	941.8	979.5	1066.7	1153.9	1187.7
57.5°	864.5	906.1	999.3	1094.5	1128.2
60°	789.1	834.7	937.8	1033.0	1070.7
62.5°	715.8	761.4	868.4	967.6	1005.2
65°	636.5	690.0	801.0	902.1	937.8
67.5°	561.1	618.6	735.6	834.7	870.4
70°	487.8	543.3	668.2	765.3	801.0
72.5°	408.4	471.9	596.8	697.9	735.6
75°	329.1	404.5	527.4	626.5	662.2
77.5°	255.8	333.1	456.0	537.3	555.2
80°	188.4	267.7	374.7	432.2	454.0
82.5°	120.9	200.3	285.5	327.2	345.0
85°	67.4	132.8	186.4	210.2	218.1
87.5°	27.8	57.5	75.3	85.3	85.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)