

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: P311052

Luminaire Tested: **24FCZ2-65HE-UNV-L82765-CP125-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: P311052
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-CP125-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" POLYCARB 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: 5931.0 lumens
Efficiency: N/A
Efficacy: 110.7 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

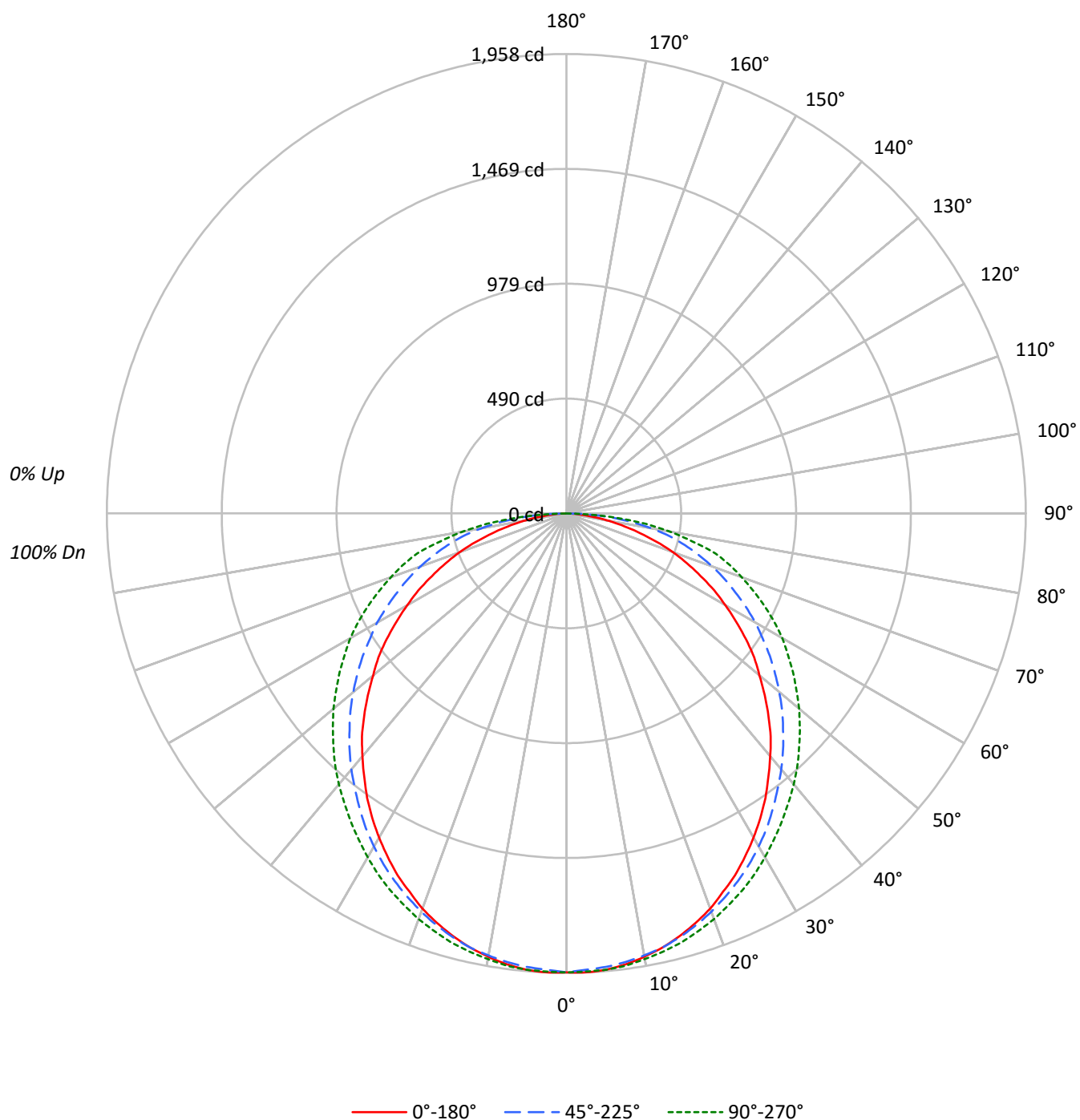
Input Watts (W): 53.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2632	2632	2632
5°	2637	2620	2637
10°	2621	2613	2635
15°	2599	2604	2637
20°	2567	2586	2634
25°	2527	2568	2632
30°	2479	2547	2629
35°	2431	2521	2631
40°	2374	2502	2647
45°	2318	2486	2670
50°	2249	2480	2710
55°	2193	2483	2765
60°	2108	2505	2859
65°	2011	2531	2963
70°	1904	2609	3127
75°	1698	2721	3417
80°	1448	2882	3491
85°	1033	2856	3342



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	185.1	3.1
10°-20°	529.3	8.9
20°-30°	799.5	13.5
30°-40°	963.5	16.2
40°-50°	1011.5	17.1
50°-60°	946.4	16.0
60°-70°	781.5	13.2
70°-80°	532.5	9.0
80°-90°	181.6	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°	1513.9	25.5
0°-40°	2477.4	41.8
0°-60°	4435.3	74.8
0°-90°	5931.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5931.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1956	1956	1956	1956	1956	
5°	1952	1950	1940	1952	1952	185
15°	1866	1867	1869	1889	1893	526
25°	1702	1710	1730	1763	1773	783
35°	1480	1496	1535	1586	1602	925
45°	1218	1244	1307	1378	1403	939
55°	935	972	1059	1145	1179	834
65°	632	685	795	895	931	627
75°	327	401	523	622	657	348
85°	67	132	185	209	216	84
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1956.0	1956.0	1956.0	1956.0	1956.0
2.5°	1958.0	1956.0	1946.2	1956.0	1954.0
5°	1952.1	1950.1	1940.2	1952.1	1952.1
7.5°	1938.3	1938.3	1928.4	1942.2	1944.2
10°	1918.6	1918.6	1912.7	1928.4	1928.4
12.5°	1895.0	1895.0	1895.0	1910.7	1912.7
15°	1865.5	1867.4	1869.4	1889.1	1893.0
17.5°	1830.1	1834.0	1839.9	1863.5	1867.4
20°	1792.7	1796.6	1806.4	1834.0	1839.9
22.5°	1745.4	1755.3	1769.1	1800.5	1806.4
25°	1702.1	1710.0	1729.7	1763.1	1773.0
27.5°	1649.0	1660.8	1686.4	1721.8	1735.6
30°	1595.9	1607.7	1639.2	1680.5	1692.3
32.5°	1538.8	1556.5	1590.0	1633.3	1647.0
35°	1479.8	1495.5	1534.9	1586.0	1601.8
37.5°	1414.8	1436.5	1479.8	1534.9	1554.6
40°	1351.9	1375.5	1424.7	1483.7	1507.3
42.5°	1288.9	1312.5	1367.6	1434.5	1458.1
45°	1218.1	1243.6	1306.6	1377.5	1403.0
47.5°	1147.2	1178.7	1247.6	1322.4	1349.9
50°	1074.4	1109.8	1184.6	1263.3	1294.8
52.5°	1009.5	1042.9	1121.6	1206.3	1235.8
55°	934.7	972.1	1058.7	1145.3	1178.7
57.5°	858.0	899.3	991.8	1086.2	1119.7
60°	783.2	828.4	930.8	1025.2	1062.6
62.5°	710.4	755.6	861.9	960.3	997.7
65°	631.7	684.8	795.0	895.3	930.8
67.5°	556.9	614.0	730.1	828.4	863.9
70°	484.1	539.2	663.1	759.6	795.0
72.5°	405.4	468.3	592.3	692.7	730.1
75°	326.7	401.4	523.4	621.8	657.2
77.5°	253.8	330.6	452.6	533.3	551.0
80°	186.9	265.7	371.9	429.0	450.6
82.5°	120.0	198.7	283.4	324.7	342.4
85°	66.9	131.8	185.0	208.6	216.5
87.5°	27.5	57.1	74.8	84.6	84.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)