

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: P311716

Luminaire Tested: **24FCZ2-65HE-UNV-L82765-S-CA125-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: P311716
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-L82765-S-CA125-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" 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: 6111.0 lumens
Efficiency: N/A
Efficacy: 115.7 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

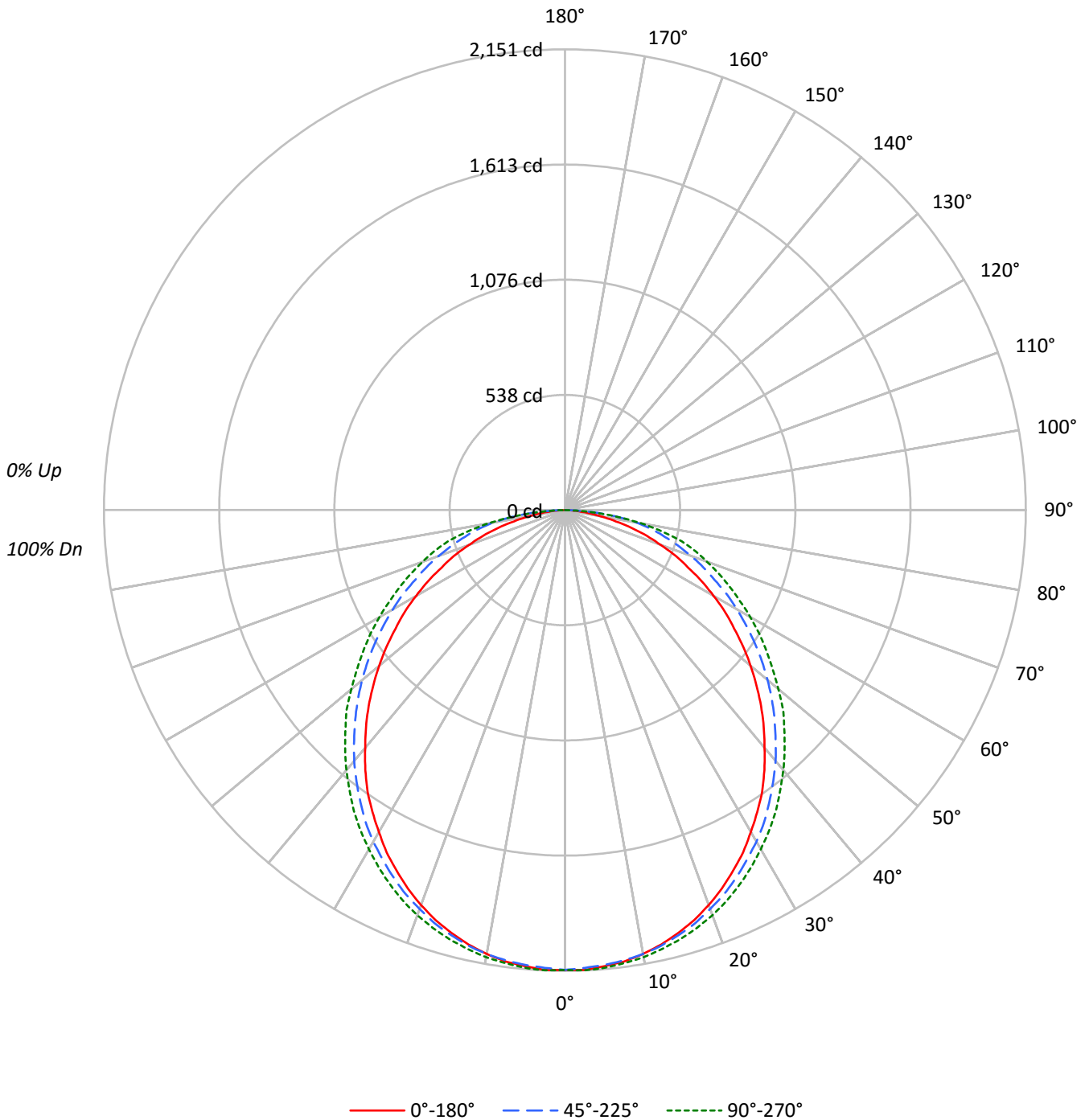
Input Watts (W): 52.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2888	2888	2888
5°	2886	2879	2897
10°	2875	2875	2896
15°	2847	2861	2890
20°	2810	2838	2882
25°	2758	2810	2864
30°	2696	2777	2841
35°	2637	2732	2818
40°	2547	2687	2785
45°	2464	2633	2755
50°	2369	2584	2722
55°	2263	2536	2696
60°	2157	2497	2690
65°	2021	2453	2707
70°	1871	2467	2780
75°	1675	2512	2937
80°	1354	2662	2872
85°	1019	2337	2277



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	203.2	3.3
10°-20°	580.7	9.5
20°-30°	873.0	14.3
30°-40°	1039.9	17.0
40°-50°	1064.2	17.4
50°-60°	958.1	15.7
60°-70°	752.4	12.3
70°-80°	488.3	8.0
80°-90°	151.0	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°	1657.0	27.1
0°-40°	2696.8	44.1
0°-60°	4719.2	77.2
0°-90°	6111.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6111.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2147	2147	2147	2147	2147	
5°	2137	2141	2131	2143	2145	203
15°	2044	2050	2054	2071	2075	576
25°	1858	1873	1893	1924	1929	856
35°	1605	1625	1664	1704	1716	1001
45°	1295	1326	1384	1436	1448	998
55°	965	1007	1081	1138	1149	865
65°	635	683	771	835	850	632
75°	322	384	483	549	565	341
85°	66	122	151	148	148	80
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2146.8	2146.8	2146.8	2146.8	2146.8
2.5°	2148.8	2148.8	2139.1	2148.8	2150.7
5°	2137.1	2141.0	2131.3	2143.0	2144.9
7.5°	2125.5	2125.5	2119.7	2131.3	2133.2
10°	2104.1	2106.1	2104.1	2117.7	2119.7
12.5°	2077.0	2080.8	2082.8	2096.4	2098.3
15°	2044.0	2049.8	2053.7	2071.1	2075.0
17.5°	2007.1	2012.9	2022.6	2042.0	2045.9
20°	1962.4	1970.2	1981.8	2007.1	2012.9
22.5°	1913.9	1921.7	1941.1	1964.4	1974.1
25°	1857.6	1873.1	1892.6	1923.6	1929.4
27.5°	1801.3	1814.9	1840.1	1873.1	1880.9
30°	1735.3	1756.7	1787.7	1820.7	1828.5
32.5°	1671.3	1692.6	1729.5	1764.4	1774.1
35°	1605.3	1624.7	1663.5	1704.3	1715.9
37.5°	1529.6	1554.8	1597.5	1638.3	1649.9
40°	1450.0	1481.0	1529.6	1572.3	1585.9
42.5°	1374.3	1407.3	1455.8	1502.4	1517.9
45°	1294.7	1325.8	1384.0	1436.4	1448.0
47.5°	1213.2	1248.1	1310.2	1362.6	1382.0
50°	1131.6	1168.5	1234.5	1288.9	1300.5
52.5°	1050.1	1088.9	1158.8	1217.1	1222.9
55°	964.7	1007.4	1081.2	1137.5	1149.1
57.5°	887.1	924.0	1003.5	1061.8	1075.4
60°	801.7	842.4	927.8	982.2	999.7
62.5°	720.1	762.8	852.1	906.5	922.0
65°	634.7	683.3	770.6	834.7	850.2
67.5°	561.0	607.6	700.7	762.8	778.4
70°	475.6	528.0	627.0	691.0	706.6
72.5°	401.8	456.2	555.1	617.3	640.6
75°	322.2	384.3	483.3	549.3	564.9
77.5°	244.6	316.4	417.3	467.8	467.8
80°	174.7	250.4	343.6	366.9	370.7
82.5°	114.5	188.3	254.3	252.3	252.3
85°	66.0	122.3	151.4	147.5	147.5
87.5°	25.2	50.5	54.4	54.4	52.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)