

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: P314471

Luminaire Tested: **24FCZ2-65HE-UNV-L83050-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: P314471
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-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: 6256.0 lumens
Efficiency: N/A
Efficacy: 118.9 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

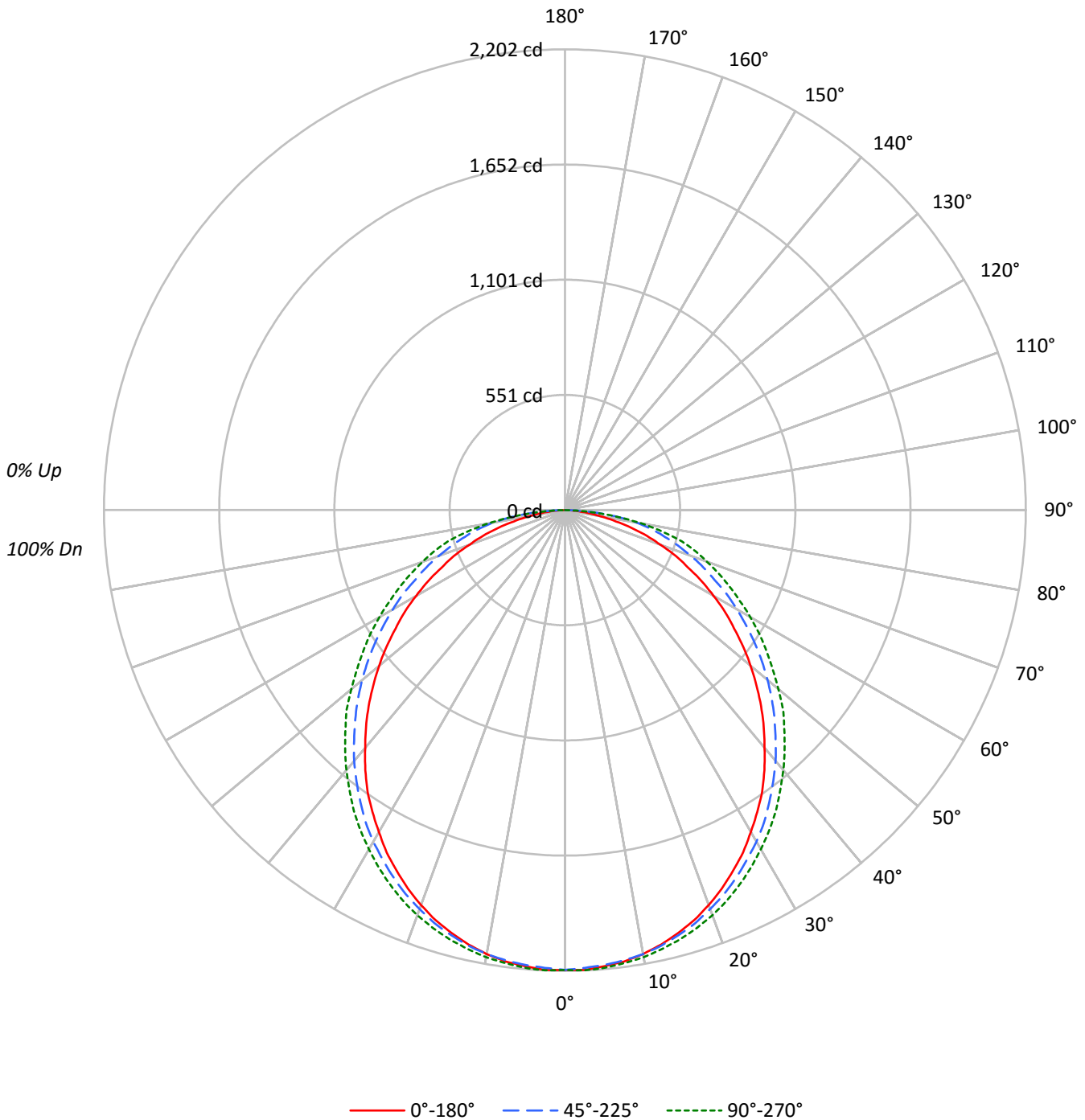
Input Watts (W): 52.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	2957	2957	2957
5°	2955	2947	2966
10°	2943	2943	2965
15°	2915	2929	2959
20°	2877	2905	2951
25°	2823	2876	2932
30°	2760	2843	2908
35°	2699	2797	2885
40°	2607	2750	2852
45°	2522	2696	2821
50°	2425	2645	2787
55°	2317	2596	2760
60°	2208	2556	2754
65°	2069	2512	2771
70°	1915	2525	2845
75°	1715	2572	3006
80°	1385	2725	2941
85°	1044	2393	2331



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	208.1	3.3
10°-20°	594.5	9.5
20°-30°	893.7	14.3
30°-40°	1064.5	17.0
40°-50°	1089.5	17.4
50°-60°	980.9	15.7
60°-70°	770.3	12.3
70°-80°	499.9	8.0
80°-90°	154.6	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°	1696.3	27.1
0°-40°	2760.8	44.1
0°-60°	4831.2	77.2
0°-90°	6256.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6256.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2198	2198	2198	2198	2198	
5°	2188	2192	2182	2194	2196	208
15°	2092	2098	2102	2120	2124	590
25°	1902	1918	1938	1969	1975	876
35°	1643	1663	1703	1745	1757	1025
45°	1325	1357	1417	1470	1482	1022
55°	988	1031	1107	1164	1176	885
65°	650	700	789	854	870	647
75°	330	394	495	562	578	349
85°	68	125	155	151	151	82
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2197.8	2197.8	2197.8	2197.8	2197.8
2.5°	2199.8	2199.8	2189.8	2199.8	2201.7
5°	2187.8	2191.8	2181.9	2193.8	2195.8
7.5°	2175.9	2175.9	2170.0	2181.9	2183.9
10°	2154.1	2156.0	2154.1	2168.0	2170.0
12.5°	2126.2	2130.2	2132.2	2146.1	2148.1
15°	2092.5	2098.4	2102.4	2120.3	2124.2
17.5°	2054.7	2060.7	2070.6	2090.5	2094.4
20°	2009.0	2016.9	2028.9	2054.7	2060.7
22.5°	1959.3	1967.3	1987.1	2011.0	2020.9
25°	1901.7	1917.6	1937.5	1969.3	1975.2
27.5°	1844.1	1858.0	1883.8	1917.6	1925.5
30°	1776.5	1798.4	1830.2	1863.9	1871.9
32.5°	1710.9	1732.8	1770.5	1806.3	1816.2
35°	1643.4	1663.2	1703.0	1744.7	1756.6
37.5°	1565.9	1591.7	1635.4	1677.1	1689.1
40°	1484.4	1516.2	1565.9	1609.6	1623.5
42.5°	1406.9	1440.7	1490.4	1538.0	1553.9
45°	1325.4	1357.2	1416.8	1470.5	1482.4
47.5°	1242.0	1277.7	1341.3	1395.0	1414.8
50°	1158.5	1196.3	1263.8	1319.5	1331.4
52.5°	1075.0	1114.8	1186.3	1245.9	1251.9
55°	987.6	1031.3	1106.8	1164.5	1176.4
57.5°	908.1	945.9	1027.3	1087.0	1100.9
60°	820.7	862.4	949.9	1005.5	1023.4
62.5°	737.2	780.9	872.4	928.0	943.9
65°	649.8	699.5	788.9	854.5	870.4
67.5°	574.3	622.0	717.4	780.9	796.8
70°	486.8	540.5	641.8	707.4	723.3
72.5°	411.3	467.0	568.3	631.9	655.8
75°	329.9	393.5	494.8	562.4	578.3
77.5°	250.4	323.9	427.2	478.9	478.9
80°	178.8	256.3	351.7	375.6	379.5
82.5°	117.2	192.8	260.3	258.3	258.3
85°	67.6	125.2	155.0	151.0	151.0
87.5°	25.8	51.7	55.6	55.6	53.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)