

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: P311748

Luminaire Tested: **24FCZ2-65HE-UNV-L82765-S-CP250-W2A-U-5700K**

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: P311748
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-CP250-W2A-U-5700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.250" POLYCARB SHEET
Light Source: (336) 5700K 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: 6075.0 lumens
Efficiency: N/A
Efficacy: 112.3 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

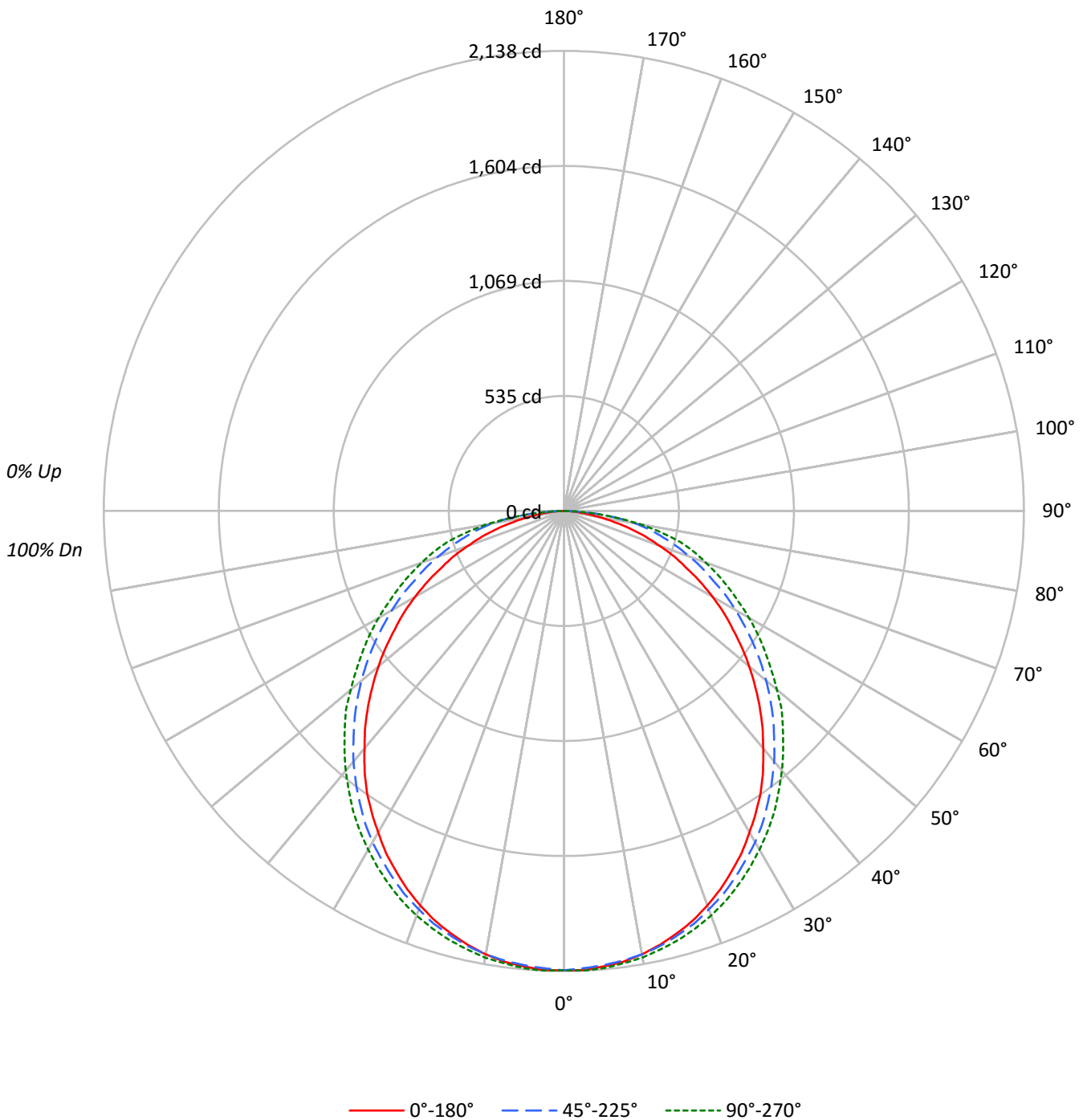
Input Watts (W): 54.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2872	2872	2872
5°	2869	2862	2880
10°	2858	2858	2879
15°	2830	2844	2873
20°	2793	2821	2865
25°	2742	2793	2848
30°	2680	2761	2824
35°	2621	2716	2802
40°	2532	2671	2769
45°	2449	2618	2739
50°	2355	2569	2706
55°	2250	2521	2680
60°	2144	2482	2674
65°	2009	2439	2691
70°	1860	2452	2763
75°	1665	2498	2919
80°	1346	2646	2856
85°	1013	2323	2265



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	202.0	3.3
10°-20°	577.3	9.5
20°-30°	867.8	14.3
30°-40°	1033.7	17.0
40°-50°	1058.0	17.4
50°-60°	952.5	15.7
60°-70°	748.0	12.3
70°-80°	485.5	8.0
80°-90°	150.2	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°	1647.2	27.1
0°-40°	2680.9	44.1
0°-60°	4691.4	77.2
0°-90°	6075.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6075.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2134	2134	2134	2134	2134	
5°	2124	2128	2119	2130	2132	202
15°	2032	2038	2042	2059	2063	573
25°	1847	1862	1881	1912	1918	851
35°	1596	1615	1654	1694	1706	996
45°	1287	1318	1376	1428	1440	992
55°	959	1002	1075	1131	1142	860
65°	631	679	766	830	845	628
75°	320	382	480	546	562	339
85°	66	122	150	147	147	79
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2134.2	2134.2	2134.2	2134.2	2134.2
2.5°	2136.1	2136.1	2126.5	2136.1	2138.0
5°	2124.5	2128.4	2118.8	2130.3	2132.3
7.5°	2113.0	2113.0	2107.2	2118.8	2120.7
10°	2091.7	2093.7	2091.7	2105.2	2107.2
12.5°	2064.7	2068.6	2070.5	2084.0	2085.9
15°	2031.9	2037.7	2041.6	2058.9	2062.8
17.5°	1995.3	2001.0	2010.7	2030.0	2033.8
20°	1950.9	1958.6	1970.2	1995.3	2001.0
22.5°	1902.6	1910.3	1929.6	1952.8	1962.4
25°	1846.7	1862.1	1881.4	1912.3	1918.1
27.5°	1790.7	1804.2	1829.3	1862.1	1869.8
30°	1725.1	1746.3	1777.2	1810.0	1817.7
32.5°	1661.4	1682.7	1719.3	1754.0	1763.7
35°	1595.8	1615.1	1653.7	1694.2	1705.8
37.5°	1520.6	1545.6	1588.1	1628.6	1640.2
40°	1441.4	1472.3	1520.6	1563.0	1576.5
42.5°	1366.2	1399.0	1447.2	1493.5	1509.0
45°	1287.1	1317.9	1375.8	1427.9	1439.5
47.5°	1206.0	1240.8	1302.5	1354.6	1373.9
50°	1125.0	1161.6	1227.3	1281.3	1292.9
52.5°	1043.9	1082.5	1152.0	1209.9	1215.7
55°	959.0	1001.5	1074.8	1130.8	1142.3
57.5°	881.8	918.5	997.6	1055.5	1069.0
60°	796.9	837.5	922.4	976.4	993.8
62.5°	715.9	758.4	847.1	901.1	916.6
65°	631.0	679.2	766.1	829.7	845.2
67.5°	557.7	604.0	696.6	758.4	773.8
70°	472.8	524.9	623.3	687.0	702.4
72.5°	399.4	453.5	551.9	613.6	636.8
75°	320.3	382.1	480.5	546.1	561.5
77.5°	243.1	314.5	414.9	465.0	465.0
80°	173.7	248.9	341.5	364.7	368.6
82.5°	113.8	187.2	252.8	250.9	250.9
85°	65.6	121.6	150.5	146.7	146.7
87.5°	25.1	50.2	54.0	54.0	52.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)