

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: P314468

Luminaire Tested: **24FCZ2-65HE-UNV-L83050-S-CA08-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: P314468
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-CA08-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.08" ACRYLIC 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: 6656.0 lumens
Efficiency: N/A
Efficacy: 120.6 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

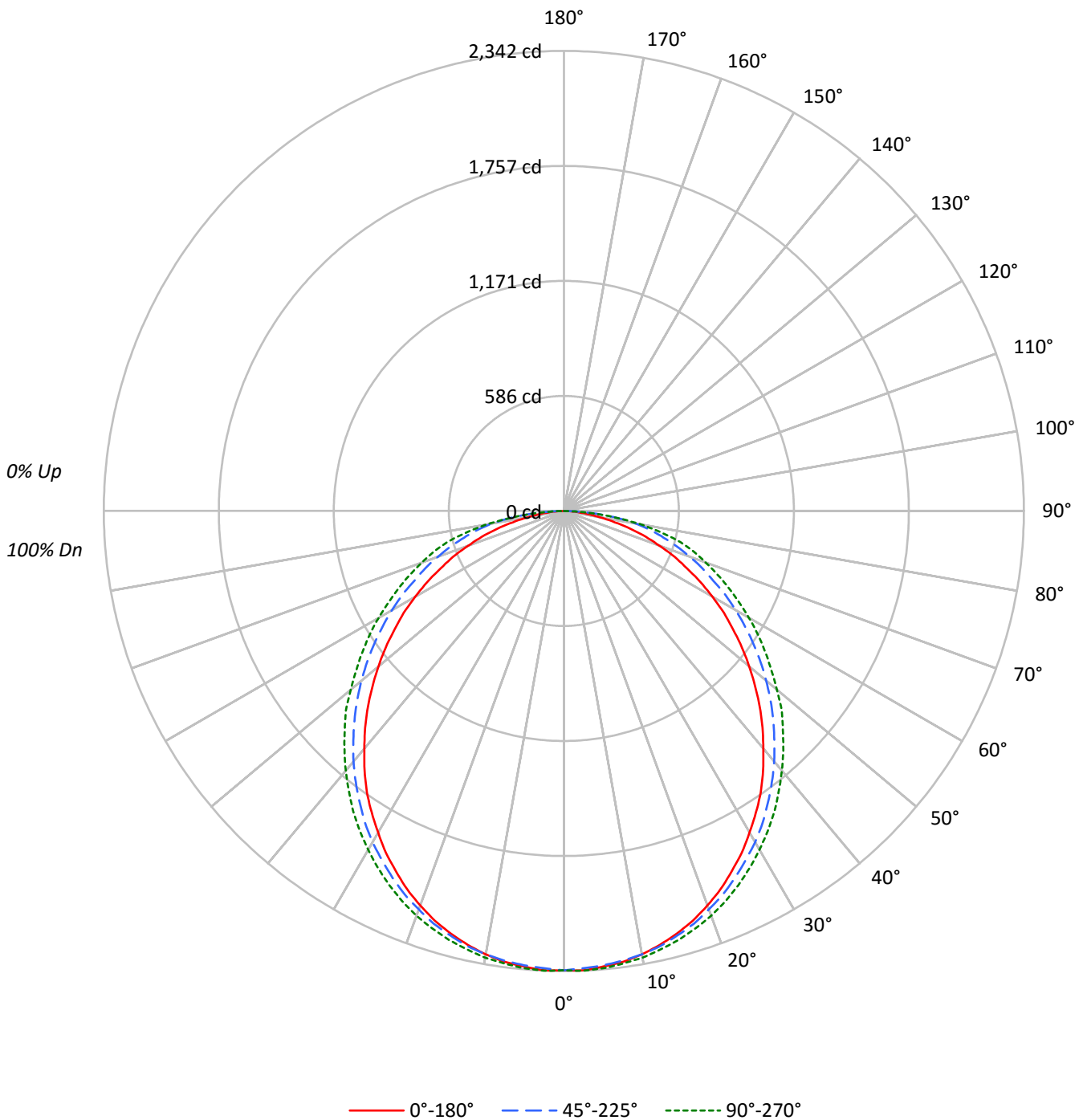
Input Watts (W): 55.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3146	3146	3146
5°	3144	3135	3155
10°	3131	3131	3154
15°	3101	3116	3148
20°	3060	3091	3139
25°	3004	3060	3120
30°	2937	3025	3094
35°	2872	2976	3070
40°	2774	2926	3034
45°	2683	2868	3001
50°	2580	2815	2965
55°	2465	2762	2936
60°	2350	2720	2930
65°	2201	2672	2948
70°	2038	2686	3028
75°	1825	2737	3198
80°	1475	2899	3129
85°	1110	2546	2481



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	221.4	3.3
10°-20°	632.5	9.5
20°-30°	950.8	14.3
30°-40°	1132.6	17.0
40°-50°	1159.2	17.4
50°-60°	1043.6	15.7
60°-70°	819.5	12.3
70°-80°	531.9	8.0
80°-90°	164.5	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°	1804.7	27.1
0°-40°	2937.3	44.1
0°-60°	5140.1	77.2
0°-90°	6656.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6656.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2338	2338	2338	2338	2338	
5°	2328	2332	2321	2334	2336	221
15°	2226	2233	2237	2256	2260	628
25°	2023	2040	2061	2095	2102	932
35°	1748	1770	1812	1856	1869	1091
45°	1410	1444	1507	1564	1577	1087
55°	1051	1097	1178	1239	1252	942
65°	691	744	839	909	926	688
75°	351	419	526	598	615	371
85°	72	133	165	161	161	87
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2338.3	2338.3	2338.3	2338.3	2338.3
2.5°	2340.4	2340.4	2329.8	2340.4	2342.5
5°	2327.7	2332.0	2321.4	2334.1	2336.2
7.5°	2315.0	2315.0	2308.7	2321.4	2323.5
10°	2291.8	2293.9	2291.8	2306.6	2308.7
12.5°	2262.2	2266.4	2268.5	2283.3	2285.4
15°	2226.2	2232.6	2236.8	2255.8	2260.1
17.5°	2186.1	2192.4	2203.0	2224.1	2228.4
20°	2137.4	2145.9	2158.6	2186.1	2192.4
22.5°	2084.6	2093.1	2114.2	2139.6	2150.1
25°	2023.3	2040.2	2061.3	2095.2	2101.5
27.5°	1962.0	1976.8	2004.3	2040.2	2048.7
30°	1890.1	1913.3	1947.2	1983.1	1991.6
32.5°	1820.3	1843.6	1883.7	1921.8	1932.4
35°	1748.4	1769.6	1811.9	1856.3	1868.9
37.5°	1666.0	1693.5	1740.0	1784.4	1797.1
40°	1579.3	1613.1	1666.0	1712.5	1727.3
42.5°	1496.8	1532.8	1585.6	1636.4	1653.3
45°	1410.2	1444.0	1507.4	1564.5	1577.2
47.5°	1321.4	1359.4	1427.1	1484.2	1505.3
50°	1232.6	1272.7	1344.6	1403.8	1416.5
52.5°	1143.8	1186.1	1262.2	1325.6	1331.9
55°	1050.8	1097.3	1177.6	1238.9	1251.6
57.5°	966.2	1006.4	1093.0	1156.5	1171.3
60°	873.2	917.6	1010.6	1069.8	1088.8
62.5°	784.4	830.9	928.1	987.3	1004.2
65°	691.3	744.2	839.3	909.1	926.0
67.5°	611.0	661.7	763.2	830.9	847.8
70°	518.0	575.1	682.9	752.7	769.6
72.5°	437.6	496.8	604.7	672.3	697.7
75°	351.0	418.6	526.4	598.3	615.2
77.5°	266.4	344.6	454.6	509.5	509.5
80°	190.3	272.7	374.2	399.6	403.8
82.5°	124.7	205.1	277.0	274.8	274.8
85°	71.9	133.2	164.9	160.7	160.7
87.5°	27.5	55.0	59.2	59.2	57.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)