

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: P314148

Luminaire Tested: **24FCZ2-75HE-UNV-L83050-CA125-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: P314148
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: 24FCZ2-75HE-UNV-L83050-CA125-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" 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: 7279.0 lumens
Efficiency: N/A
Efficacy: 110.5 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

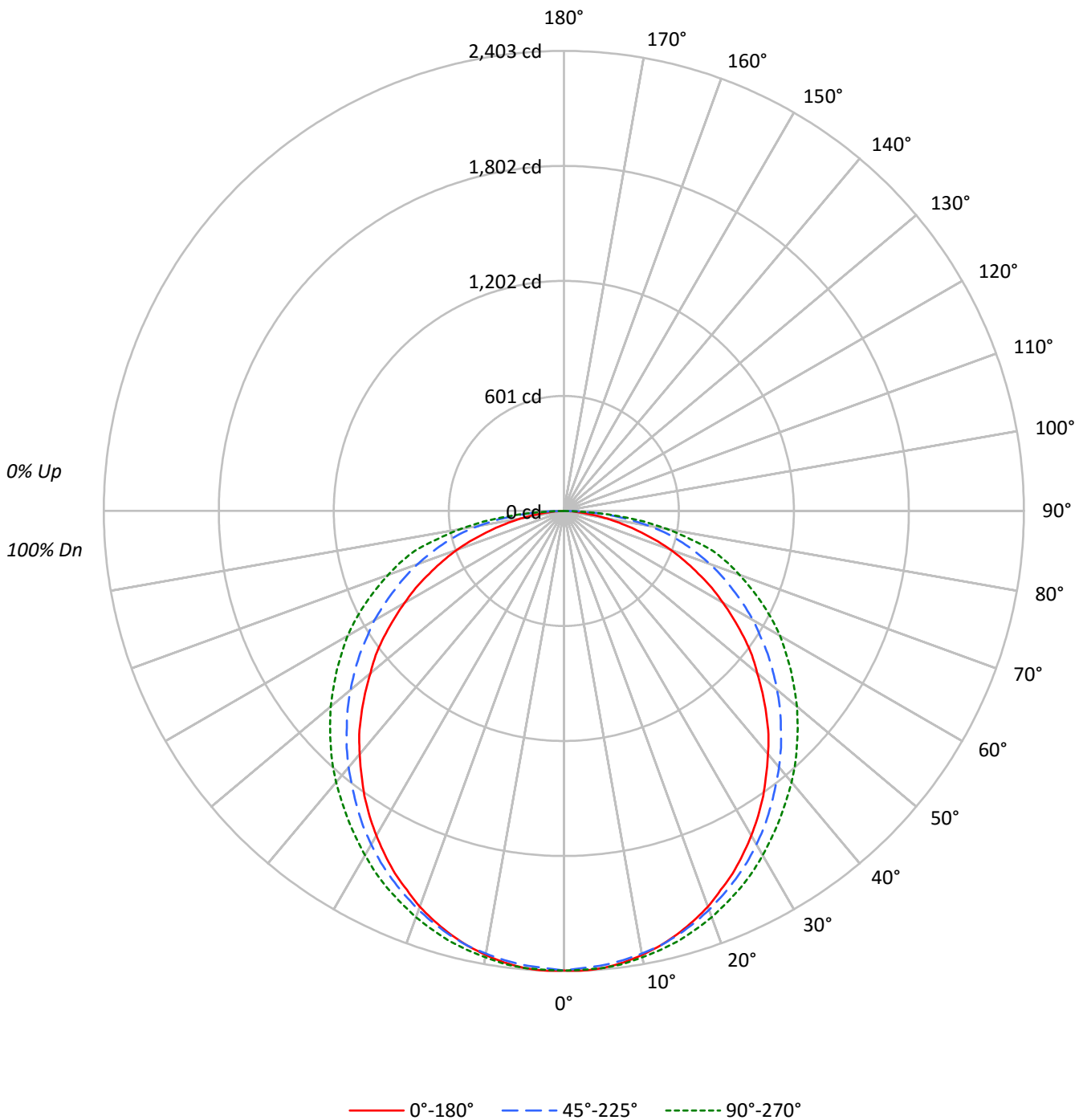
Input Watts (W): 65.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	98	94	105	100	96	92	96	92	89	92	89	87	88	86	84	82
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	79	67	58	52	64	57	51	62	56	50	60	54	50	47
5	74	61	52	45	72	60	51	44	58	50	44	56	49	43	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	64	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	37	31	57	45	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3230	3230	3230
5°	3236	3216	3236
10°	3217	3207	3233
15°	3189	3196	3236
20°	3150	3174	3233
25°	3101	3151	3230
30°	3043	3125	3227
35°	2983	3094	3229
40°	2914	3071	3249
45°	2845	3051	3276
50°	2760	3043	3326
55°	2691	3048	3393
60°	2587	3074	3509
65°	2468	3106	3637
70°	2337	3202	3838
75°	2084	3340	4193
80°	1777	3536	4285
85°	1267	3504	4102



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	227.2	3.1
10°-20°	649.6	8.9
20°-30°	981.2	13.5
30°-40°	1182.5	16.2
40°-50°	1241.4	17.1
50°-60°	1161.4	16.0
60°-70°	959.1	13.2
70°-80°	653.6	9.0
80°-90°	222.9	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°	1858.0	25.5
0°-40°	3040.5	41.8
0°-60°	5443.4	74.8
0°-90°	7279.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7279.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2401	2401	2401	2401	2401	
5°	2396	2393	2381	2396	2396	227
15°	2290	2292	2294	2318	2323	645
25°	2089	2099	2123	2164	2176	961
35°	1816	1835	1884	1946	1966	1135
45°	1495	1526	1604	1690	1722	1153
55°	1147	1193	1299	1406	1447	1024
65°	775	840	976	1099	1142	769
75°	401	493	642	763	807	427
85°	82	162	227	256	266	103
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2400.6	2400.6	2400.6	2400.6	2400.6
2.5°	2403.0	2400.6	2388.5	2400.6	2398.1
5°	2395.7	2393.3	2381.2	2395.7	2395.7
7.5°	2378.8	2378.8	2366.7	2383.6	2386.1
10°	2354.7	2354.7	2347.4	2366.7	2366.7
12.5°	2325.7	2325.7	2325.7	2345.0	2347.4
15°	2289.5	2291.9	2294.3	2318.4	2323.3
17.5°	2246.0	2250.8	2258.1	2287.0	2291.9
20°	2200.1	2204.9	2217.0	2250.8	2258.1
22.5°	2142.1	2154.2	2171.1	2209.8	2217.0
25°	2089.0	2098.7	2122.8	2163.9	2176.0
27.5°	2023.8	2038.3	2069.7	2113.2	2130.1
30°	1958.6	1973.1	2011.7	2062.4	2076.9
32.5°	1888.6	1910.3	1951.4	2004.5	2021.4
35°	1816.1	1835.4	1883.7	1946.5	1965.8
37.5°	1736.4	1763.0	1816.1	1883.7	1907.9
40°	1659.1	1688.1	1748.5	1820.9	1849.9
42.5°	1581.9	1610.8	1678.5	1760.6	1789.5
45°	1494.9	1526.3	1603.6	1690.5	1721.9
47.5°	1408.0	1446.6	1531.1	1622.9	1656.7
50°	1318.6	1362.1	1453.9	1550.5	1589.1
52.5°	1238.9	1280.0	1376.6	1480.4	1516.6
55°	1147.1	1193.0	1299.3	1405.6	1446.6
57.5°	1053.0	1103.7	1217.2	1333.1	1374.2
60°	961.2	1016.7	1142.3	1258.2	1304.1
62.5°	871.8	927.4	1057.8	1178.5	1224.4
65°	775.2	840.4	975.7	1098.8	1142.3
67.5°	683.5	753.5	896.0	1016.7	1060.2
70°	594.1	661.7	813.9	932.2	975.7
72.5°	497.5	574.8	726.9	850.1	896.0
75°	400.9	492.7	642.4	763.2	806.6
77.5°	311.5	405.7	555.5	654.5	676.2
80°	229.4	326.0	456.4	526.5	553.0
82.5°	147.3	243.9	347.8	398.5	420.2
85°	82.1	161.8	227.0	256.0	265.7
87.5°	33.8	70.0	91.8	103.8	103.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)