

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: P311127

Luminaire Tested: **24FCZ2-75HE-UNV-L82765-CA08-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: P311127
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-L82765-CA08-W2A-U-5700K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.08" ACRYLIC 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: 7185.0 lumens
Efficiency: N/A
Efficacy: 111.2 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

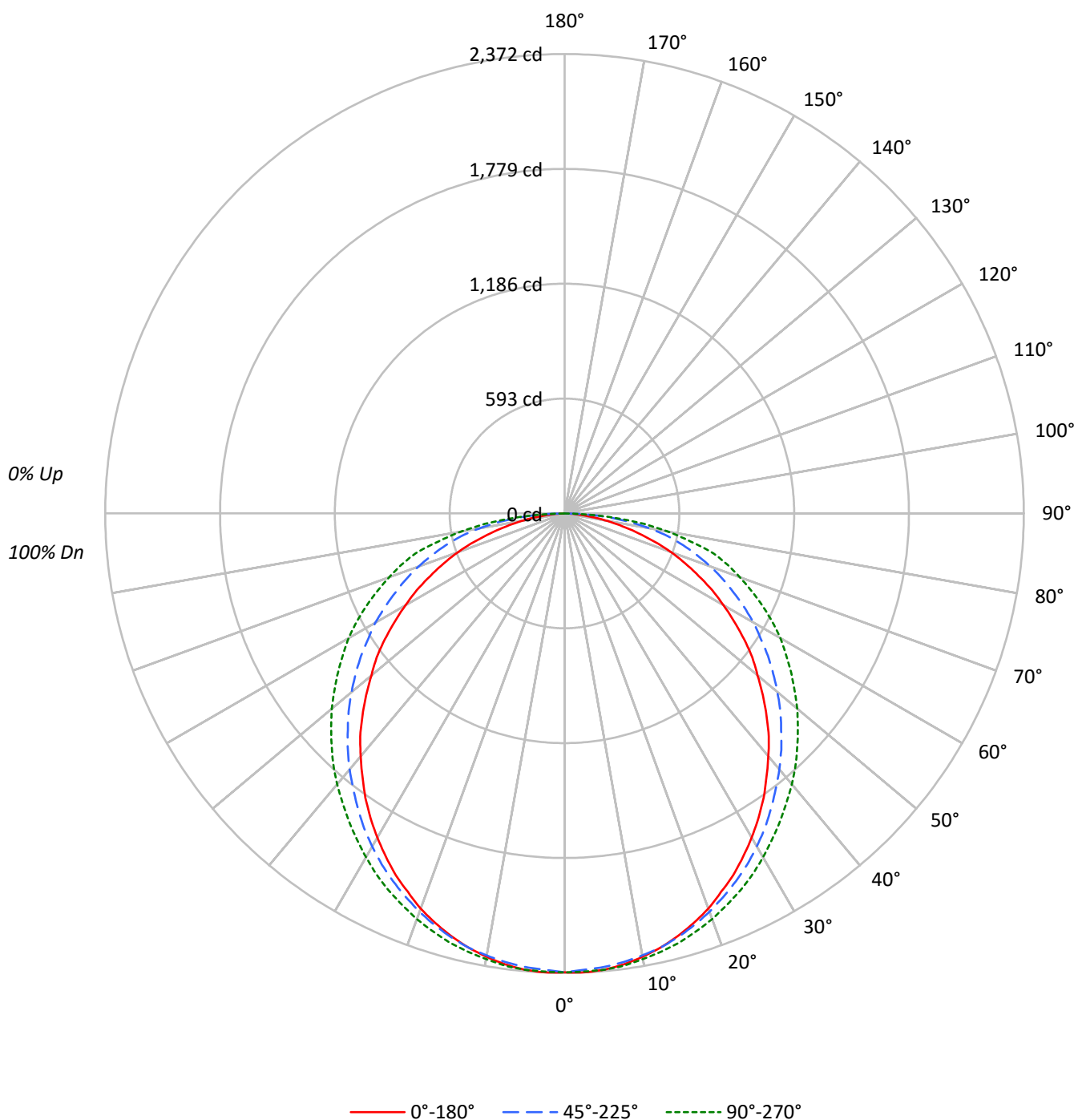
Input Watts (W): 64.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				0
RW	70	50	30	10	70	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		100
1	108	103	98	94	105	100	96	92	96	92	89		92	89	87		82
2	98	89	81	75	95	87	80	74	83	78	73		80	75	71		67
3	89	77	69	62	86	76	68	61	73	66	60		70	64	59		56
4	81	68	59	52	79	67	58	52	64	57	51		62	56	50		47
5	74	61	52	45	72	60	51	44	58	50	44		56	49	43		41
6	69	55	46	39	67	54	45	39	52	44	38		50	43	38		36
7	64	50	41	34	62	49	40	34	47	39	34		46	39	34		31
8	59	45	37	31	57	45	36	30	43	36	30		42	35	30		28
9	55	41	33	27	54	41	33	27	40	32	27		39	32	27		25
10	52	38	30	25	50	38	30	25	37	30	25		36	29	25		23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3188	3188	3188
5°	3194	3175	3194
10°	3176	3166	3192
15°	3148	3155	3194
20°	3110	3133	3191
25°	3061	3111	3189
30°	3004	3085	3185
35°	2945	3054	3187
40°	2876	3031	3207
45°	2808	3012	3234
50°	2725	3004	3283
55°	2656	3008	3350
60°	2553	3034	3464
65°	2436	3066	3590
70°	2307	3161	3789
75°	2057	3296	4139
80°	1755	3491	4230
85°	1252	3460	4048



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	224.3	3.1
10°-20°	641.2	8.9
20°-30°	968.5	13.5
30°-40°	1167.3	16.2
40°-50°	1225.4	17.1
50°-60°	1146.4	16.0
60°-70°	946.8	13.2
70°-80°	645.1	9.0
80°-90°	220.0	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°	1834.0	25.5
0°-40°	3001.2	41.8
0°-60°	5373.1	74.8
0°-90°	7185.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7185.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2370	2370	2370	2370	2370	
5°	2365	2362	2350	2365	2365	224
15°	2260	2262	2265	2288	2293	637
25°	2062	2072	2095	2136	2148	949
35°	1793	1812	1859	1921	1940	1120
45°	1476	1507	1583	1669	1700	1138
55°	1132	1178	1282	1387	1428	1011
65°	765	830	963	1085	1128	759
75°	396	486	634	753	796	422
85°	81	160	224	253	262	101
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2369.6	2369.6	2369.6	2369.6	2369.6
2.5°	2371.9	2369.6	2357.6	2369.6	2367.2
5°	2364.8	2362.4	2350.5	2364.8	2364.8
7.5°	2348.1	2348.1	2336.2	2352.9	2355.2
10°	2324.3	2324.3	2317.1	2336.2	2336.2
12.5°	2295.7	2295.7	2295.7	2314.7	2317.1
15°	2259.9	2262.3	2264.7	2288.5	2293.3
17.5°	2217.0	2221.8	2228.9	2257.5	2262.3
20°	2171.7	2176.5	2188.4	2221.8	2228.9
22.5°	2114.5	2126.4	2143.1	2181.2	2188.4
25°	2062.0	2071.6	2095.4	2135.9	2147.9
27.5°	1997.7	2012.0	2043.0	2085.9	2102.6
30°	1933.3	1947.6	1985.8	2035.8	2050.1
32.5°	1864.2	1885.6	1926.2	1978.6	1995.3
35°	1792.7	1811.7	1859.4	1921.4	1940.5
37.5°	1714.0	1740.2	1792.7	1859.4	1883.2
40°	1637.7	1666.3	1725.9	1797.4	1826.0
42.5°	1561.4	1590.0	1656.8	1737.8	1766.4
45°	1475.6	1506.6	1582.9	1668.7	1699.7
47.5°	1389.8	1427.9	1511.4	1601.9	1635.3
50°	1301.6	1344.5	1435.1	1530.4	1568.6
52.5°	1222.9	1263.4	1358.8	1461.3	1497.1
55°	1132.3	1177.6	1282.5	1387.4	1427.9
57.5°	1039.4	1089.4	1201.5	1315.9	1356.4
60°	948.8	1003.6	1127.6	1242.0	1287.3
62.5°	860.6	915.4	1044.1	1163.3	1208.6
65°	765.2	829.6	963.1	1084.7	1127.6
67.5°	674.6	743.8	884.4	1003.6	1046.5
70°	586.4	653.2	803.4	920.2	963.1
72.5°	491.1	567.4	717.5	839.1	884.4
75°	395.7	486.3	634.1	753.3	796.2
77.5°	307.5	400.5	548.3	646.0	667.5
80°	226.5	321.8	450.5	519.7	545.9
82.5°	145.4	240.8	343.3	393.3	414.8
85°	81.1	159.7	224.1	252.7	262.2
87.5°	33.4	69.1	90.6	102.5	102.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)