

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: P311122

Luminaire Tested: **24FCZ2-75HE-UNV-L82765-CA08-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: P311122
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-3500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.08" 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: 6731.0 lumens
Efficiency: N/A
Efficacy: 106.7 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

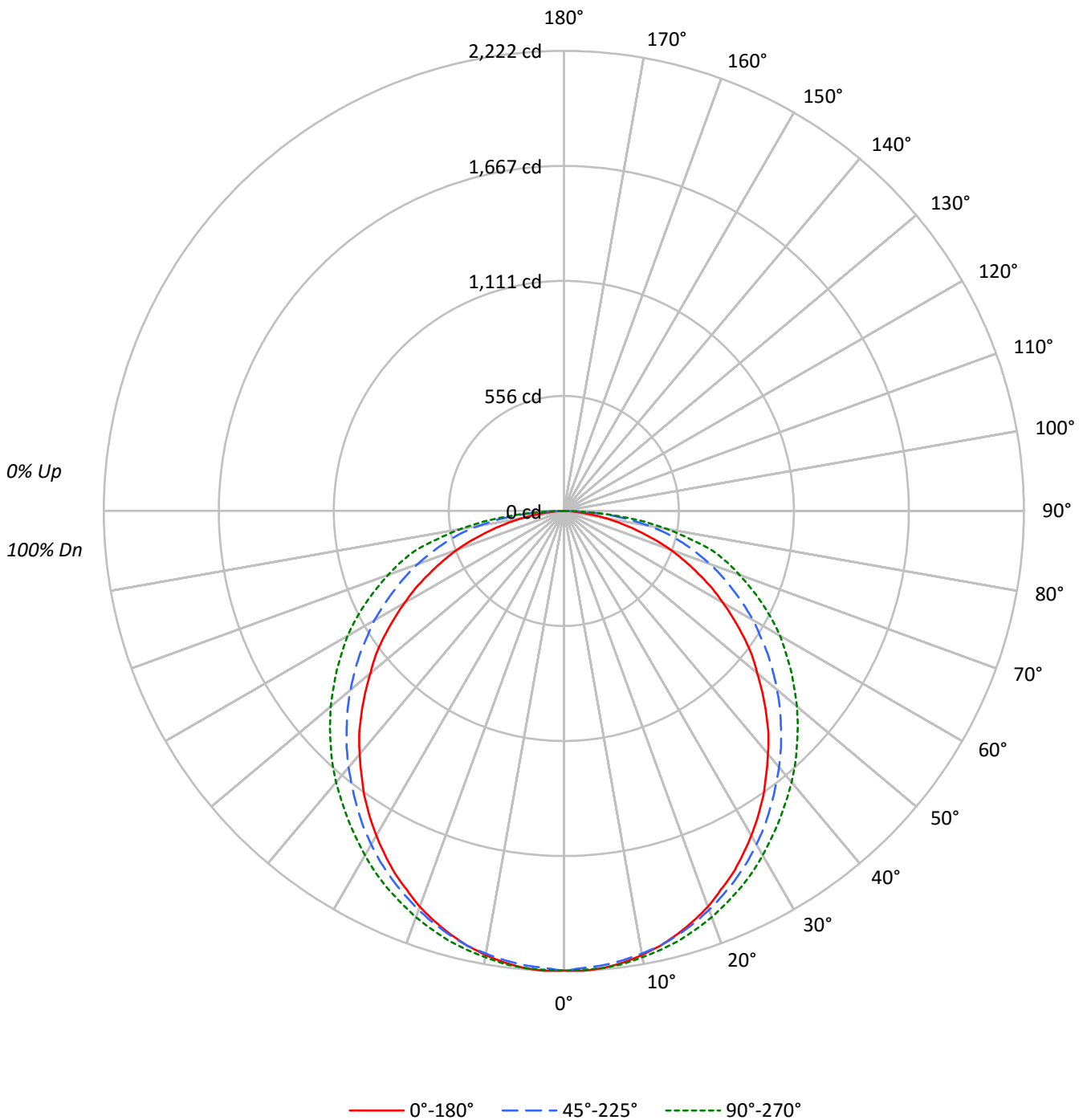
Input Watts (W): 63.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	2987	2987	2987
5°	2992	2974	2992
10°	2975	2966	2990
15°	2949	2955	2993
20°	2913	2935	2990
25°	2868	2914	2987
30°	2814	2890	2984
35°	2758	2861	2986
40°	2695	2840	3005
45°	2630	2822	3030
50°	2552	2814	3076
55°	2488	2818	3138
60°	2392	2842	3245
65°	2282	2872	3363
70°	2161	2961	3549
75°	1927	3088	3878
80°	1644	3271	3963
85°	1172	3240	3793



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	210.1	3.1
10°-20°	600.7	8.9
20°-30°	907.3	13.5
30°-40°	1093.5	16.2
40°-50°	1148.0	17.1
50°-60°	1074.0	16.0
60°-70°	886.9	13.2
70°-80°	604.4	9.0
80°-90°	206.1	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°	1718.1	25.5
0°-40°	2811.6	41.8
0°-60°	5033.6	74.8
0°-90°	6731.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6731.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2220	2220	2220	2220	2220	
5°	2215	2213	2202	2215	2215	210
15°	2117	2119	2122	2144	2148	597
25°	1932	1941	1963	2001	2012	889
35°	1679	1697	1742	1800	1818	1049
45°	1382	1411	1483	1563	1592	1066
55°	1061	1103	1202	1300	1338	947
65°	717	777	902	1016	1056	711
75°	371	456	594	706	746	395
85°	76	150	210	237	246	95
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2219.8	2219.8	2219.8	2219.8	2219.8
2.5°	2222.1	2219.8	2208.7	2219.8	2217.6
5°	2215.4	2213.1	2202.0	2215.4	2215.4
7.5°	2199.7	2199.7	2188.6	2204.2	2206.4
10°	2177.4	2177.4	2170.7	2188.6	2188.6
12.5°	2150.6	2150.6	2150.6	2168.5	2170.7
15°	2117.1	2119.3	2121.6	2143.9	2148.4
17.5°	2076.9	2081.4	2088.1	2114.9	2119.3
20°	2034.5	2038.9	2050.1	2081.4	2088.1
22.5°	1980.9	1992.0	2007.7	2043.4	2050.1
25°	1931.7	1940.7	1963.0	2001.0	2012.1
27.5°	1871.4	1884.8	1913.9	1954.1	1969.7
30°	1811.1	1824.5	1860.3	1907.2	1920.6
32.5°	1746.4	1766.5	1804.4	1853.6	1869.2
35°	1679.4	1697.3	1741.9	1800.0	1817.8
37.5°	1605.7	1630.3	1679.4	1741.9	1764.2
40°	1534.2	1561.0	1616.9	1683.9	1710.7
42.5°	1462.8	1489.6	1552.1	1628.0	1654.8
45°	1382.4	1411.4	1482.9	1563.3	1592.3
47.5°	1302.0	1337.7	1415.9	1500.7	1532.0
50°	1219.3	1259.5	1344.4	1433.7	1469.5
52.5°	1145.6	1183.6	1272.9	1369.0	1402.5
55°	1060.8	1103.2	1201.5	1299.7	1337.7
57.5°	973.7	1020.6	1125.5	1232.7	1270.7
60°	888.8	940.2	1056.3	1163.5	1205.9
62.5°	806.2	857.6	978.2	1089.8	1132.2
65°	716.9	777.2	902.2	1016.1	1056.3
67.5°	632.0	696.8	828.5	940.2	980.4
70°	549.4	611.9	752.6	862.0	902.2
72.5°	460.0	531.5	672.2	786.1	828.5
75°	370.7	455.6	594.0	705.7	745.9
77.5°	288.1	375.2	513.6	605.2	625.3
80°	212.2	301.5	422.1	486.8	511.4
82.5°	136.2	225.6	321.6	368.5	388.6
85°	75.9	149.6	209.9	236.7	245.7
87.5°	31.3	64.8	84.9	96.0	96.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)