

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: P314147

Luminaire Tested: **24FCZ2-75HE-UNV-L83050-CA125-W2A-U-4000K**

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: P314147
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-4000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" ACRYLIC SHEET
Light Source: (336) 4000K 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: 7211.0 lumens
Efficiency: N/A
Efficacy: 112.3 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

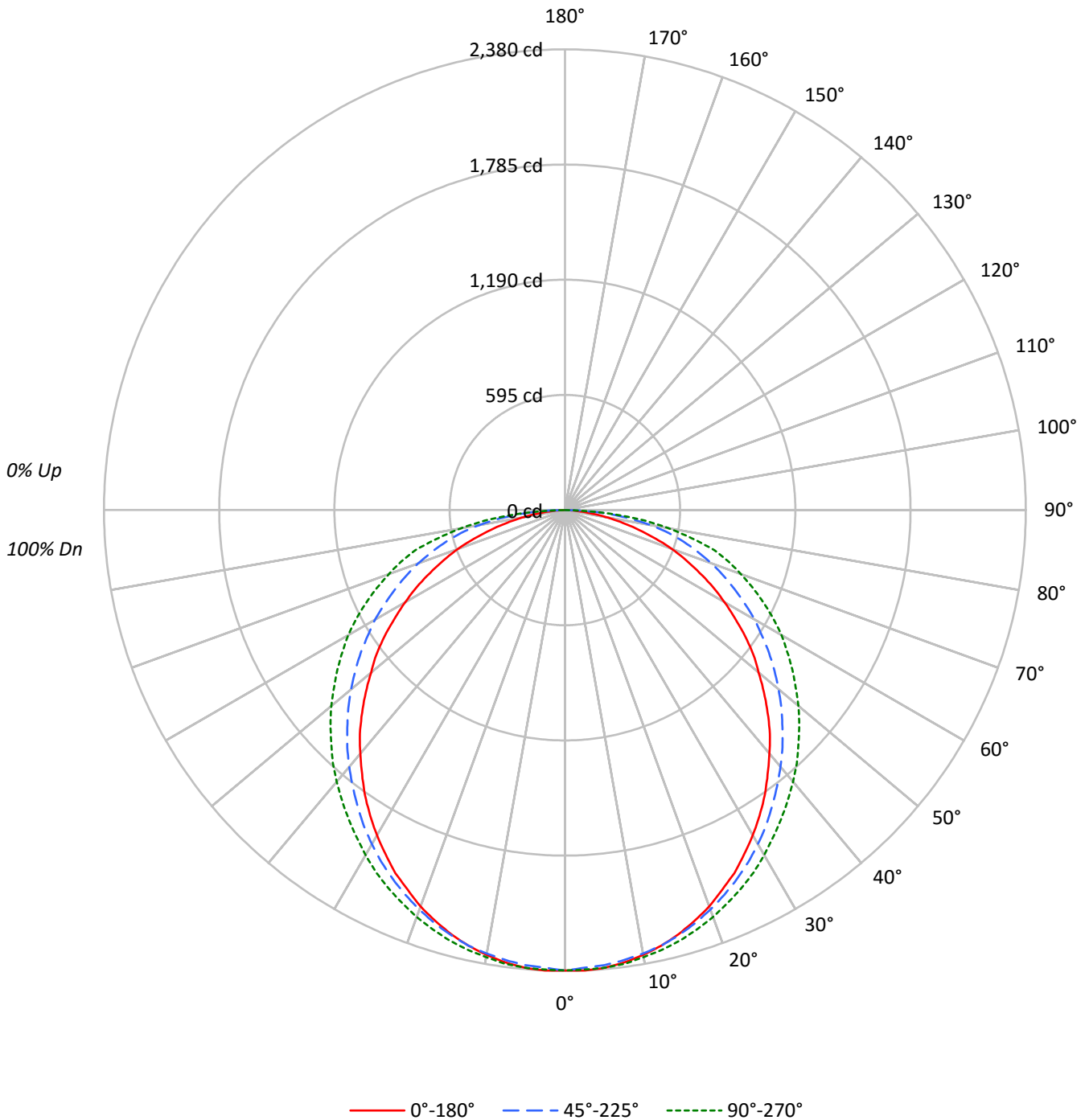
Input Watts (W): 64.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	3200	3200	3200
5°	3205	3186	3205
10°	3187	3177	3203
15°	3159	3166	3206
20°	3121	3145	3203
25°	3072	3122	3200
30°	3015	3096	3197
35°	2955	3065	3199
40°	2887	3042	3219
45°	2818	3023	3246
50°	2734	3015	3295
55°	2666	3019	3362
60°	2562	3045	3476
65°	2445	3077	3603
70°	2316	3172	3803
75°	2065	3308	4154
80°	1761	3504	4245
85°	1255	3472	4063



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	225.1	3.1
10°-20°	643.5	8.9
20°-30°	972.0	13.5
30°-40°	1171.5	16.2
40°-50°	1229.8	17.1
50°-60°	1150.6	16.0
60°-70°	950.2	13.2
70°-80°	647.5	9.0
80°-90°	220.8	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°	1840.6	25.5
0°-40°	3012.1	41.8
0°-60°	5392.5	74.8
0°-90°	7211.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7211.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2378	2378	2378	2378	2378	
5°	2373	2371	2359	2373	2373	225
15°	2268	2270	2273	2297	2302	639
25°	2070	2079	2103	2144	2156	952
35°	1799	1818	1866	1928	1948	1124
45°	1481	1512	1589	1675	1706	1142
55°	1136	1182	1287	1392	1433	1014
65°	768	833	967	1089	1132	762
75°	397	488	636	756	799	424
85°	81	160	225	254	263	102
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2378.1	2378.1	2378.1	2378.1	2378.1
2.5°	2380.5	2378.1	2366.2	2378.1	2375.7
5°	2373.3	2370.9	2359.0	2373.3	2373.3
7.5°	2356.6	2356.6	2344.6	2361.4	2363.8
10°	2332.7	2332.7	2325.5	2344.6	2344.6
12.5°	2304.0	2304.0	2304.0	2323.1	2325.5
15°	2268.1	2270.5	2272.9	2296.8	2301.6
17.5°	2225.0	2229.8	2237.0	2265.7	2270.5
20°	2179.5	2184.3	2196.3	2229.8	2237.0
22.5°	2122.1	2134.1	2150.8	2189.1	2196.3
25°	2069.5	2079.1	2103.0	2143.7	2155.6
27.5°	2004.9	2019.3	2050.4	2093.4	2110.2
30°	1940.3	1954.7	1992.9	2043.2	2057.5
32.5°	1870.9	1892.5	1933.1	1985.8	2002.5
35°	1799.1	1818.3	1866.1	1928.3	1947.5
37.5°	1720.2	1746.5	1799.1	1866.1	1890.1
40°	1643.6	1672.3	1732.2	1803.9	1832.6
42.5°	1567.1	1595.8	1662.8	1744.1	1772.8
45°	1480.9	1512.0	1588.6	1674.7	1705.8
47.5°	1394.8	1433.1	1516.8	1607.7	1641.2
50°	1306.3	1349.4	1440.3	1536.0	1574.3
52.5°	1227.3	1268.0	1363.7	1466.6	1502.5
55°	1136.4	1181.9	1287.2	1392.4	1433.1
57.5°	1043.1	1093.4	1205.8	1320.6	1361.3
60°	952.2	1007.2	1131.6	1246.5	1291.9
62.5°	863.7	918.7	1047.9	1167.5	1213.0
65°	768.0	832.6	966.6	1088.6	1131.6
67.5°	677.1	746.5	887.6	1007.2	1050.3
70°	588.6	655.5	806.3	923.5	966.6
72.5°	492.9	569.4	720.1	842.2	887.6
75°	397.2	488.1	636.4	756.0	799.1
77.5°	308.6	401.9	550.3	648.4	669.9
80°	227.3	323.0	452.2	521.6	547.9
82.5°	145.9	241.6	344.5	394.8	416.3
85°	81.3	160.3	224.9	253.6	263.2
87.5°	33.5	69.4	90.9	102.9	102.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)