

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: P314142

Luminaire Tested: **24FCZ2-75HE-UNV-L83050-CA08-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: P314142
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-CA08-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.08" 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: 7236.0 lumens
Efficiency: N/A
Efficacy: 112.7 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

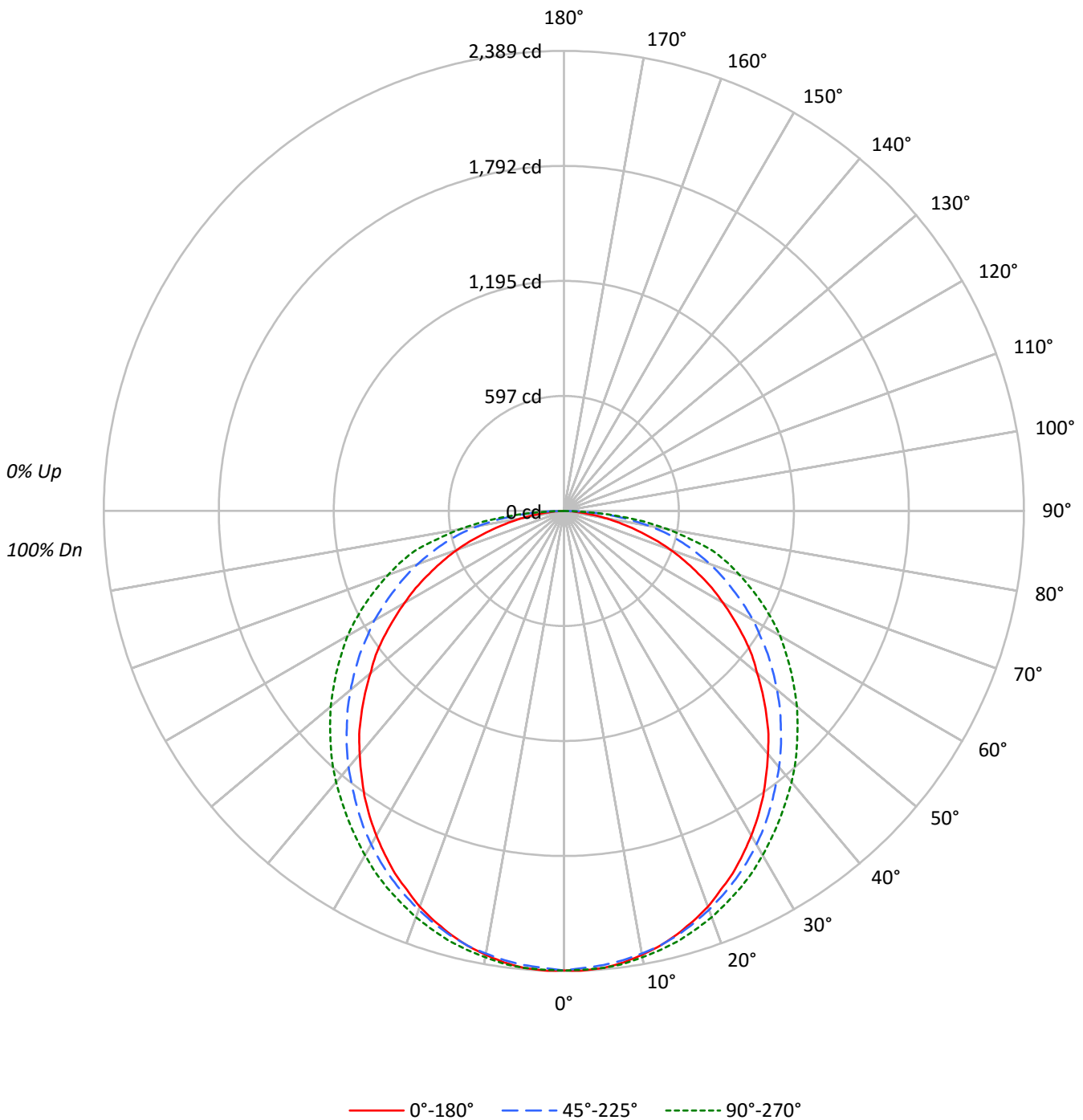
Input Watts (W): 64.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3211	3211	3211
5°	3217	3197	3217
10°	3198	3188	3215
15°	3170	3177	3217
20°	3132	3156	3214
25°	3083	3133	3211
30°	3025	3107	3208
35°	2965	3076	3210
40°	2897	3053	3230
45°	2828	3033	3257
50°	2744	3025	3307
55°	2675	3030	3373
60°	2571	3056	3489
65°	2453	3088	3615
70°	2323	3183	3816
75°	2072	3320	4169
80°	1767	3515	4260
85°	1260	3484	4077



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	225.8	3.1
10°-20°	645.8	8.9
20°-30°	975.4	13.5
30°-40°	1175.5	16.2
40°-50°	1234.1	17.1
50°-60°	1154.6	16.0
60°-70°	953.5	13.2
70°-80°	649.7	9.0
80°-90°	221.6	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°	1847.0	25.5
0°-40°	3022.5	41.8
0°-60°	5411.2	74.8
0°-90°	7236.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7236.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2386	2386	2386	2386	2386	
5°	2382	2379	2367	2382	2382	226
15°	2276	2278	2281	2305	2310	642
25°	2077	2086	2110	2151	2163	955
35°	1805	1825	1873	1935	1954	1128
45°	1486	1517	1594	1680	1712	1146
55°	1140	1186	1292	1397	1438	1018
65°	771	836	970	1092	1136	764
75°	398	490	639	759	802	425
85°	82	161	226	254	264	102
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2386.4	2386.4	2386.4	2386.4	2386.4
2.5°	2388.8	2386.4	2374.4	2386.4	2384.0
5°	2381.6	2379.2	2367.2	2381.6	2381.6
7.5°	2364.8	2364.8	2352.8	2369.6	2372.0
10°	2340.8	2340.8	2333.6	2352.8	2352.8
12.5°	2311.9	2311.9	2311.9	2331.2	2333.6
15°	2275.9	2278.3	2280.7	2304.7	2309.5
17.5°	2232.7	2237.5	2244.7	2273.5	2278.3
20°	2187.1	2191.9	2203.9	2237.5	2244.7
22.5°	2129.5	2141.5	2158.3	2196.7	2203.9
25°	2076.7	2086.3	2110.3	2151.1	2163.1
27.5°	2011.8	2026.3	2057.5	2100.7	2117.5
30°	1947.0	1961.4	1999.8	2050.3	2064.7
32.5°	1877.4	1899.0	1939.8	1992.6	2009.4
35°	1805.4	1824.6	1872.6	1935.0	1954.2
37.5°	1726.2	1752.6	1805.4	1872.6	1896.6
40°	1649.3	1678.1	1738.2	1810.2	1839.0
42.5°	1572.5	1601.3	1668.5	1750.2	1779.0
45°	1486.1	1517.3	1594.1	1680.5	1711.8
47.5°	1399.7	1438.1	1522.1	1613.3	1646.9
50°	1310.8	1354.0	1445.3	1541.3	1579.7
52.5°	1231.6	1272.4	1368.4	1471.7	1507.7
55°	1140.4	1186.0	1291.6	1397.3	1438.1
57.5°	1046.7	1097.2	1210.0	1325.2	1366.0
60°	955.5	1010.7	1135.6	1250.8	1296.4
62.5°	866.7	921.9	1051.5	1171.6	1217.2
65°	770.6	835.5	969.9	1092.4	1135.6
67.5°	679.4	749.0	890.7	1010.7	1053.9
70°	590.6	657.8	809.1	926.7	969.9
72.5°	494.6	571.4	722.6	845.1	890.7
75°	398.5	489.8	638.6	758.6	801.9
77.5°	309.7	403.3	552.2	650.6	672.2
80°	228.1	324.1	453.7	523.4	549.8
82.5°	146.4	242.5	345.7	396.1	417.7
85°	81.6	160.9	225.7	254.5	264.1
87.5°	33.6	69.6	91.2	103.2	103.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)