

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: P314143

Luminaire Tested: **24FCZ2-75HE-UNV-L83050-CA08-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: P314143
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-4500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.08" 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: 7305.0 lumens
Efficiency: N/A
Efficacy: 110.8 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

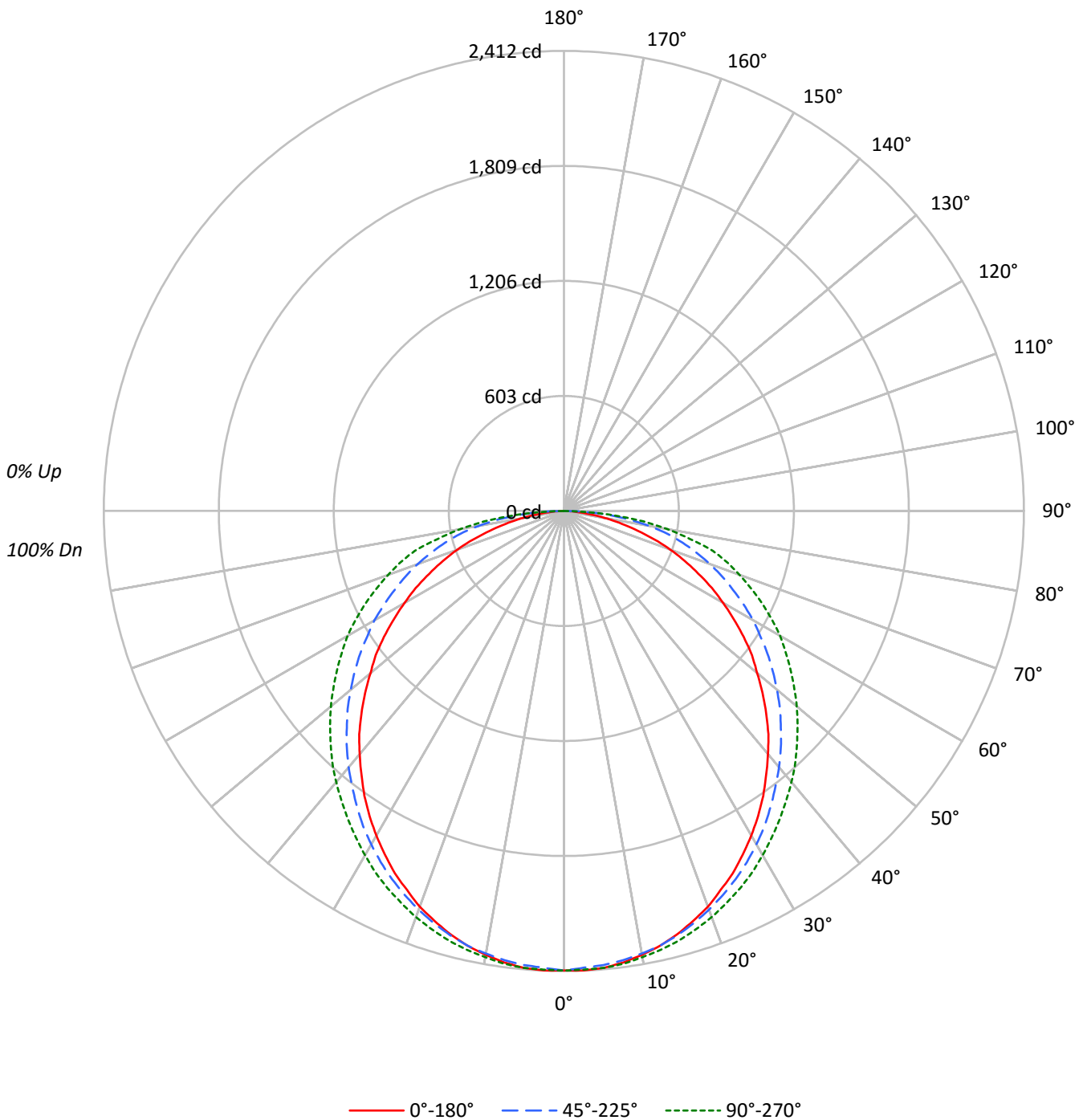
Input Watts (W): 65.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3241	3241	3241
5°	3247	3228	3247
10°	3229	3219	3245
15°	3200	3207	3248
20°	3162	3186	3245
25°	3112	3163	3242
30°	3054	3137	3238
35°	2994	3105	3241
40°	2925	3082	3261
45°	2855	3062	3288
50°	2770	3054	3338
55°	2700	3059	3406
60°	2596	3085	3522
65°	2477	3117	3650
70°	2345	3213	3852
75°	2091	3352	4208
80°	1784	3550	4300
85°	1272	3517	4116



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	228.0	3.1
10°-20°	651.9	8.9
20°-30°	984.7	13.5
30°-40°	1186.8	16.2
40°-50°	1245.9	17.1
50°-60°	1165.6	16.0
60°-70°	962.6	13.2
70°-80°	655.9	9.0
80°-90°	223.7	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°	1864.6	25.5
0°-40°	3051.4	41.8
0°-60°	5462.8	74.8
0°-90°	7305.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7305.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2409	2409	2409	2409	2409	
5°	2404	2402	2390	2404	2404	228
15°	2298	2300	2302	2327	2332	648
25°	2096	2106	2130	2172	2184	965
35°	1823	1842	1890	1954	1973	1139
45°	1500	1532	1609	1697	1728	1157
55°	1151	1197	1304	1411	1452	1028
65°	778	843	979	1103	1146	772
75°	402	494	645	766	810	429
85°	82	162	228	257	267	103
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2409.1	2409.1	2409.1	2409.1	2409.1
2.5°	2411.5	2409.1	2397.0	2409.1	2406.7
5°	2404.3	2401.9	2389.7	2404.3	2404.3
7.5°	2387.3	2387.3	2375.2	2392.2	2394.6
10°	2363.1	2363.1	2355.8	2375.2	2375.2
12.5°	2334.0	2334.0	2334.0	2353.4	2355.8
15°	2297.6	2300.1	2302.5	2326.7	2331.6
17.5°	2254.0	2258.9	2266.1	2295.2	2300.1
20°	2208.0	2212.8	2224.9	2258.9	2266.1
22.5°	2149.8	2161.9	2178.9	2217.7	2224.9
25°	2096.5	2106.2	2130.4	2171.6	2183.7
27.5°	2031.0	2045.6	2077.1	2120.7	2137.7
30°	1965.6	1980.1	2018.9	2069.8	2084.4
32.5°	1895.3	1917.1	1958.3	2011.6	2028.6
35°	1822.6	1842.0	1890.5	1953.5	1972.9
37.5°	1742.6	1769.3	1822.6	1890.5	1914.7
40°	1665.1	1694.1	1754.7	1827.4	1856.5
42.5°	1587.5	1616.6	1684.4	1766.9	1795.9
45°	1500.3	1531.8	1609.3	1696.6	1728.1
47.5°	1413.0	1451.8	1536.6	1628.7	1662.6
50°	1323.3	1366.9	1459.0	1556.0	1594.8
52.5°	1243.3	1284.5	1381.5	1485.7	1522.1
55°	1151.2	1197.3	1303.9	1410.6	1451.8
57.5°	1056.7	1107.6	1221.5	1337.9	1379.1
60°	964.6	1020.4	1146.4	1262.7	1308.8
62.5°	874.9	930.7	1061.6	1182.7	1228.8
65°	778.0	843.4	979.2	1102.8	1146.4
67.5°	685.9	756.2	899.2	1020.4	1064.0
70°	596.2	664.1	816.8	935.5	979.2
72.5°	499.3	576.8	729.5	853.1	899.2
75°	402.3	494.4	644.7	765.9	809.5
77.5°	312.7	407.2	557.4	656.8	678.6
80°	230.2	327.2	458.1	528.4	555.0
82.5°	147.8	244.8	349.0	399.9	421.7
85°	82.4	162.4	227.8	256.9	266.6
87.5°	33.9	70.3	92.1	104.2	104.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)