

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: 5707

Luminaire Tested: **FDX-340-80**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: 5707
Test Lab:
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FDX-340-80
Description: FAIL-SAFE
Light Source: F40T12 3200 LUMENS
Ballast/Driver: -

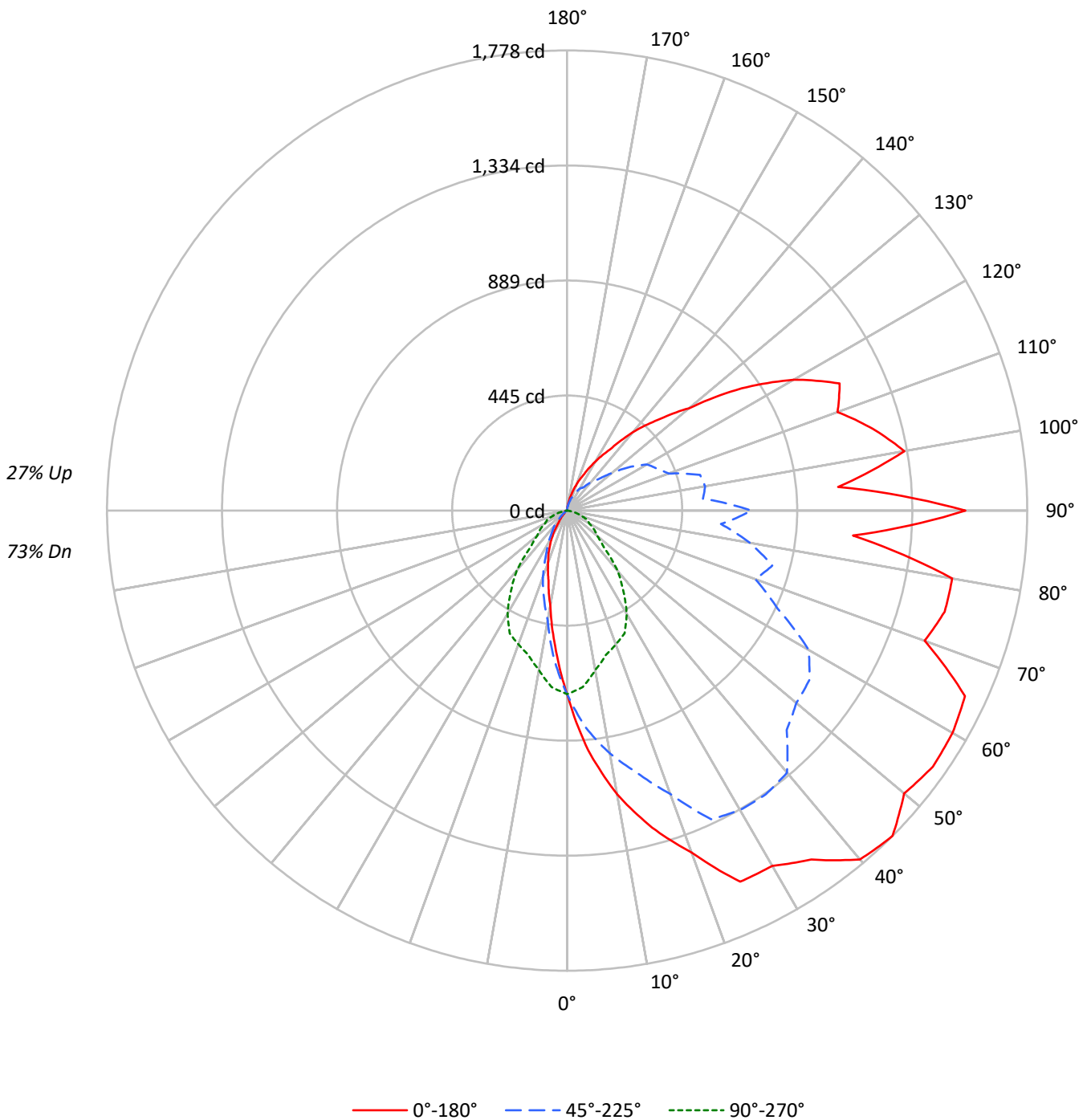
Summary

Lumens per Lamp: 3200 (3 lamps)
Luminaire Lumens: 4428.1 lumens
Efficiency: 46.1%
Efficacy: 32.8 lumens/watt
Spacing Criteria (0/90/45): 1.85 / 1.01 / 1.59
Luminous Opening: Rectangular w/ Sides (W: 4' x L: 0.5' x H: 1.1')
CIE Type: Semi-Direct

Input Watts (W): 135
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										
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	50	30	10	50	30	10	0														
RCR																																						
0	52	52	52	52	49	49	49	49	44	44	44	40	40	40	35	35	35	33	33	33	33	33	33	33														
1	46	43	40	38	43	40	38	36	36	34	33	32	31	29	29	27	26	24	24	24	24	24	24	24														
2	41	36	33	30	38	34	31	28	31	28	26	27	25	23	24	22	21	19	19	19	19	19	19	19														
3	37	31	27	24	35	30	26	23	27	23	21	24	21	19	21	19	17	15	15	15	15	15	15	15														
4	34	28	23	20	31	26	22	19	23	20	17	21	18	16	18	16	14	13	13	13	13	13	13	13														
5	31	24	20	17	29	23	19	16	21	17	15	18	16	13	16	14	12	11	11	11	11	11	11	11														
6	28	22	17	14	26	21	17	14	19	15	13	17	14	12	15	12	11	9	9	9	9	9	9	9														
7	26	20	15	12	24	19	15	12	17	13	11	15	12	10	13	11	9	8	8	8	8	8	8	8														
8	24	18	14	11	23	17	13	11	15	12	10	14	11	9	12	10	8	7	7	7	7	7	7	7														
9	22	16	12	10	21	15	12	9	14	11	9	13	10	8	11	9	7	6	6	6	6	6	6	6														
10	21	15	11	9	20	14	11	8	13	10	8	12	9	7	10	8	7	6	6	6	6	6	6	6														

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	3816	3816	3816
5°	4209	3614	2383
10°	4382	3263	1469
15°	4445	2999	978
20°	4472	2863	684
25°	4637	2758	481
30°	4339	2467	309
35°	4257	2083	155
40°	4345	1730	89
45°	4229	1194	38
50°	3930	952	30
55°	3908	856	27
60°	3846	715	27
65°	3777	681	22
70°	3284	511	18
75°	3409	359	18
80°	3475	157	11
85°	2619	30	0



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ZONAL LUMENS:

CANDELA DISTRIBUTION:

Zone	Lumens	% Fixture	% Lamp		0°	45°	90°	135°	180°	Flux
0°-10°	67.0	1.5	0.7	0°	709	709	709	709	709	
10°-20°	196.2	4.4	2.0	5°	929	844	685	576	526	93
20°-30°	330.0	7.5	3.4	15°	1268	1050	578	346	279	362
30°-40°	419.4	9.5	4.4	25°	1582	1316	524	195	164	714
40°-50°	458.5	10.4	4.8	35°	1646	1338	378	101	60	1044
50°-60°	482.3	10.9	5.0	45°	1778	1199	200	40	16	1358
60°-70°	459.1	10.4	4.8	55°	1725	1142	127	10	12	1541
70°-80°	435.0	9.8	4.5	65°	1696	898	85	8	10	1632
80°-90°	367.9	8.3	3.8	75°	1510	821	35	6	8	1587
90°-100°	338.1	7.6	3.5	85°	1109	596	2	0	0	1045
100°-110°	313.4	7.1	3.3	90°	1539	712	0	0	0	718
110°-120°	241.7	5.5	2.5	95°	1051	527	0	0	0	1069
120°-130°	162.6	3.7	1.7	105°	1222	532	0	0	0	1291
130°-140°	87.1	2.0	0.9	115°	1162	383	0	0	0	1104
140°-150°	44.5	1.0	0.5	125°	823	293	0	0	0	737
150°-160°	18.9	0.4	0.2	135°	495	171	0	0	0	389
160°-170°	5.5	0.1	0.1	145°	287	109	0	0	0	188
170°-180°	0.6	0.0	0.0	155°	156	76	0	0	0	75
0°-30°	593.2	13.4	6.2	165°	66	36	0	0	0	20
0°-40°	1012.7	22.9	10.5	175°	17	13	0	0	0	2
0°-60°	1953.6	44.1	20.3	180°	0	0	0	0	0	
0°-90°	3215.6	72.6	33.5							
90°-120°	893.3	20.2	9.3							
90°-150°	1187.4	26.8	12.4							
90°-180°	1212.0	27.4	12.6							
0°-180°	4428.1	100.0	46.1							



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	709	709	709	709	709	709	709	709	709
5°	929	903	844	767	685	631	576	542	526
10°	1113	1071	953	791	626	519	432	389	373
15°	1268	1211	1050	810	578	436	346	301	279
20°	1406	1348	1165	850	550	381	273	227	215
25°	1582	1523	1316	911	524	315	195	170	164
30°	1585	1524	1336	894	460	230	144	121	113
35°	1646	1568	1338	852	378	156	101	74	60
40°	1760	1647	1322	780	303	119	76	46	36
45°	1778	1603	1199	650	200	86	40	22	16
50°	1700	1544	1156	585	151	69	22	13	13
55°	1725	1632	1142	514	127	46	10	13	12
60°	1719	1632	1078	394	98	24	9	11	12
65°	1696	1490	898	329	85	12	8	9	10
70°	1470	1469	773	279	57	5	6	8	8
75°	1510	1540	821	248	35	5	6	8	8
80°	1511	1267	716	216	13	4	5	4	5
85°	1109	1057	596	174	2	0	0	0	0
90°	1539	1369	712	190	0	0	0	0	0
95°	1051	1019	527	142	0	0	0	0	0
100°	1323	1118	541	127	0	0	0	0	0
105°	1222	1218	532	102	0	0	0	0	0
110°	1112	1042	418	87	0	0	0	0	0
115°	1162	916	383	78	0	0	0	0	0
120°	1011	834	356	71	0	0	0	0	0
125°	823	679	293	73	0	0	0	0	0
130°	615	501	225	66	0	0	0	0	0
135°	495	400	171	57	0	0	0	0	0
140°	395	332	143	59	0	0	0	0	0
145°	287	241	109	49	0	0	0	0	0
150°	219	180	98	43	0	0	0	0	0
155°	156	130	76	33	0	0	0	0	0
160°	110	91	56	24	0	0	0	0	0
165°	66	58	36	17	0	0	0	0	0
170°	33	30	20	12	0	0	0	0	0
175°	17	15	13	12	0	0	0	0	0
180°	0	0	0	0	0	0	0	0	0

(END OF REPORT)