

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: 9549

Luminaire Tested: **FWSCR-232-120V-EB81-CSA**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: 9549
Test Lab:
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FWSCR-232-120V-EB81-CSA
Description: FAILSAFE POLYCARBONATE HIGH ABUSE LUMINAIRE WITH WHITE PAINTED
INTERIOR AND PRISMATIC WRAP LENS
Light Source: TWO 32W T8 FLUORESCENT LAMPS. LUMEN RATING = 2950 LMS.
Ballast/Driver: ONE ADVANCE 120V 1 OR 2-LAMP ELECTRONIC BALLAST NO. REL-2P32-SC

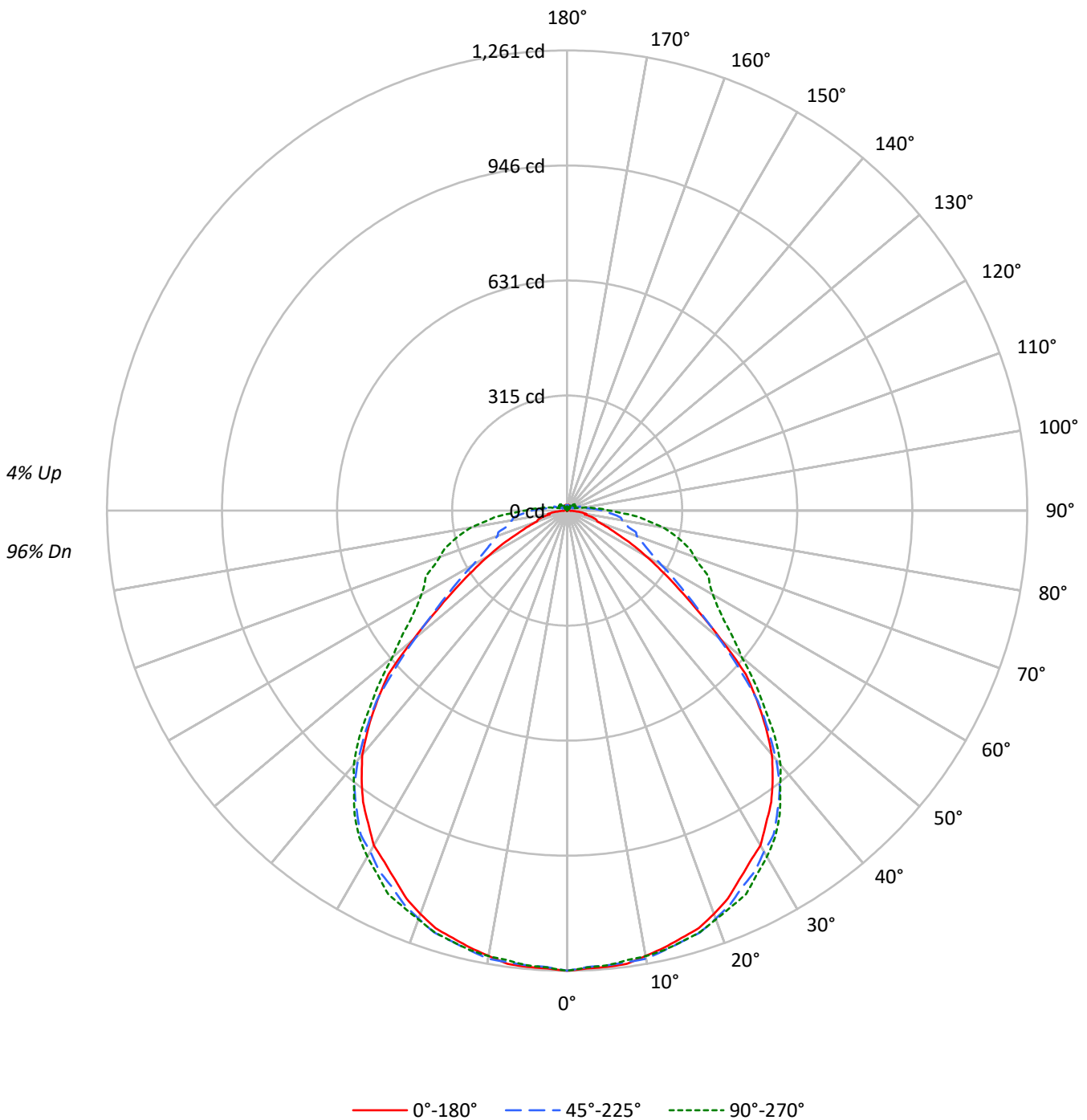
Summary

Lumens per Lamp: 2950 (2 lamps)
Luminaire Lumens: 3284.6 lumens
Efficiency: 55.7%
Efficacy: 57.1 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.28 / 1.32
Luminous Opening: Rectangular w/ Sides (W: 0.73' x L: 3.95' x H: 0.06')
CIE Type: Direct

Input Watts (W): 57.5
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				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	66	66	66	66	64	64	64	64	61	61	61		58	58	58		55	55	55	53
1	60	57	55	53	58	56	54	52	53	51	50		50	49	48		48	47	46	45
2	55	50	47	44	53	49	46	43	47	44	42		45	42	40		43	41	39	38
3	50	45	40	37	49	44	40	36	42	38	35		40	37	35		38	36	34	32
4	46	40	35	32	45	39	35	31	37	34	31		36	33	30		34	32	29	28
5	43	36	31	28	41	35	31	27	34	30	27		32	29	26		31	28	26	25
6	40	33	28	24	38	32	27	24	31	27	24		30	26	23		28	25	23	22
7	37	30	25	22	36	29	25	22	28	24	21		27	24	21		26	23	21	19
8	34	27	23	19	33	27	22	19	26	22	19		25	21	19		24	21	19	18
9	32	25	21	18	31	25	20	17	24	20	17		23	20	17		22	19	17	16
10	30	23	19	16	29	23	19	16	22	18	16		21	18	16		21	18	15	14

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4707	4707	4707
5°	4696	4660	4654
10°	4684	4670	4633
15°	4665	4637	4621
20°	4646	4612	4598
25°	4564	4537	4601
30°	4525	4473	4506
35°	4396	4369	4378
40°	4201	4105	4148
45°	3822	3650	3732
50°	3143	2909	3306
55°	2376	2358	3058
60°	1819	1988	3013
65°	1283	1839	3214
70°	932	1863	3303
75°	996	1985	3598
80°	1069	2365	3930
85°	876	3116	4328



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ZONAL LUMENS:

CANDELA DISTRIBUTION:

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	119.6	3.6	2.0	0°	1261	1261	1261	1261	1261	
10°-20°	344.7	10.5	5.8	5°	1255	1258	1251	1261	1251	119
20°-30°	524.1	16.0	8.9	15°	1212	1216	1222	1230	1222	343
30°-40°	622.2	18.9	10.5	25°	1116	1118	1137	1160	1160	516
40°-50°	567.7	17.3	9.6	35°	975	979	1005	1018	1016	607
50°-60°	383.8	11.7	6.5	45°	735	732	739	748	765	562
60°-70°	264.4	8.0	4.5	55°	373	347	398	488	525	341
70°-80°	198.6	6.0	3.4	65°	150	161	239	363	428	158
80°-90°	124.5	3.8	2.1	75°	73	73	173	301	326	73
90°-100°	55.2	1.7	0.9	85°	24	44	130	175	196	26
100°-110°	27.3	0.8	0.5	90°	8	15	97	118	115	5
110°-120°	16.8	0.5	0.3	95°	8	10	65	80	73	4
120°-130°	14.0	0.4	0.2	105°	3	15	34	30	28	3
130°-140°	9.7	0.3	0.2	115°	4	15	13	27	29	2
140°-150°	5.4	0.2	0.1	125°	0	8	14	16	24	2
150°-160°	3.6	0.1	0.1	135°	1	8	17	14	24	3
160°-170°	2.2	0.1	0.0	145°	9	0	8	15	1	5
170°-180°	0.9	0.0	0.0	155°	0	1	8	6	7	4
0°-30°	988.3	30.1	16.8	165°	9	16	7	4	5	3
0°-40°	1610.5	49.0	27.3	175°	12	16	6	5	5	1
0°-60°	2562.0	78.0	43.4	180°	12	12	12	12	12	
0°-90°	3149.5	95.9	53.4							
90°-120°	99.3	3.0	1.7							
90°-150°	128.4	3.9	2.2							
90°-180°	135.0	4.1	2.3							
0°-180°	3284.6	100.0	55.7							



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1261	1261	1261	1261	1261
2.5°	1256	1260	1252	1255	1253
5°	1255	1258	1251	1261	1251
7.5°	1253	1252	1248	1260	1243
10°	1239	1244	1247	1255	1240
12.5°	1227	1226	1234	1241	1233
15°	1212	1216	1222	1230	1222
17.5°	1200	1198	1212	1210	1211
20°	1176	1169	1190	1199	1192
22.5°	1151	1156	1168	1179	1175
25°	1116	1118	1137	1160	1160
27.5°	1085	1088	1114	1121	1125
30°	1059	1055	1079	1090	1095
32.5°	1015	1026	1053	1057	1061
35°	975	979	1005	1018	1016
37.5°	925	941	958	955	959
40°	873	888	891	901	910
42.5°	806	819	815	828	844
45°	735	732	739	748	765
47.5°	664	636	637	675	697
50°	551	532	542	598	625
52.5°	452	431	463	538	574
55°	373	347	398	488	525
57.5°	305	285	346	444	488
60°	250	239	298	414	461
62.5°	200	196	263	390	440
65°	150	161	239	363	428
67.5°	120	128	220	355	395
70°	89	107	203	336	371
72.5°	84	91	198	321	353
75°	73	73	173	301	326
77.5°	49	70	165	277	297
80°	54	62	153	242	268
82.5°	40	53	149	217	224
85°	24	44	130	175	196
87.5°	9	35	109	140	147
90°	8	15	97	118	115
92.5°	8	12	81	85	97
95°	8	10	65	80	73
97.5°	1	22	50	63	64
100°	3	20	41	53	47
102.5°	4	15	40	44	35
105°	3	15	34	30	28
107.5°	0	8	37	36	22
110°	5	14	19	27	24



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0	14	24	21	22
115°	4	15	13	27	29
117.5°	0	2	25	22	24
120°	4	7	17	25	22
122.5°	0	14	21	24	26
125°	0	8	14	16	24
127.5°	4	13	22	26	20
130°	3	7	8	15	27
132.5°	5	9	20	25	20
135°	1	8	17	14	24
137.5°	4	8	5	19	6
140°	6	7	17	9	15
142.5°	11	7	8	14	10
145°	9	0	8	15	1
147.5°	3	7	8	7	17
150°	12	7	1	15	8
152.5°	12	7	14	4	7
155°	0	1	8	6	7
157.5°	15	14	9	4	13
160°	1	15	0	6	11
162.5°	8	0	8	7	7
165°	9	16	7	4	5
167.5°	16	8	15	12	0
170°	11	8	7	11	6
172.5°	7	9	14	11	11
175°	12	16	6	5	5
177.5°	2	9	15	6	5
180°	12	12	12	12	12

(END OF REPORT)