

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: NEO-RAY

Report Number: P334027

Luminaire Tested: **S123RDW-S775D835-4F0-1E-UDD-A**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P334027
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-30)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123RDW-S775D835-4F0-1E-UDD-A
Description: DEFINE 3 REGRESSED DIRECT LED LUMINAIRE, ASYMMETRIC DIFFUSER
PENDANT/SURFACE/WALL MOUNT, 775 LUMENS PER FOOT
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2908.3 lumens
Efficiency: N/A
Efficacy: 110.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.22 / 1.35
Luminous Opening: Rectangular (W 4' x L: 0.25' x H: 0')
CIE Type: Direct

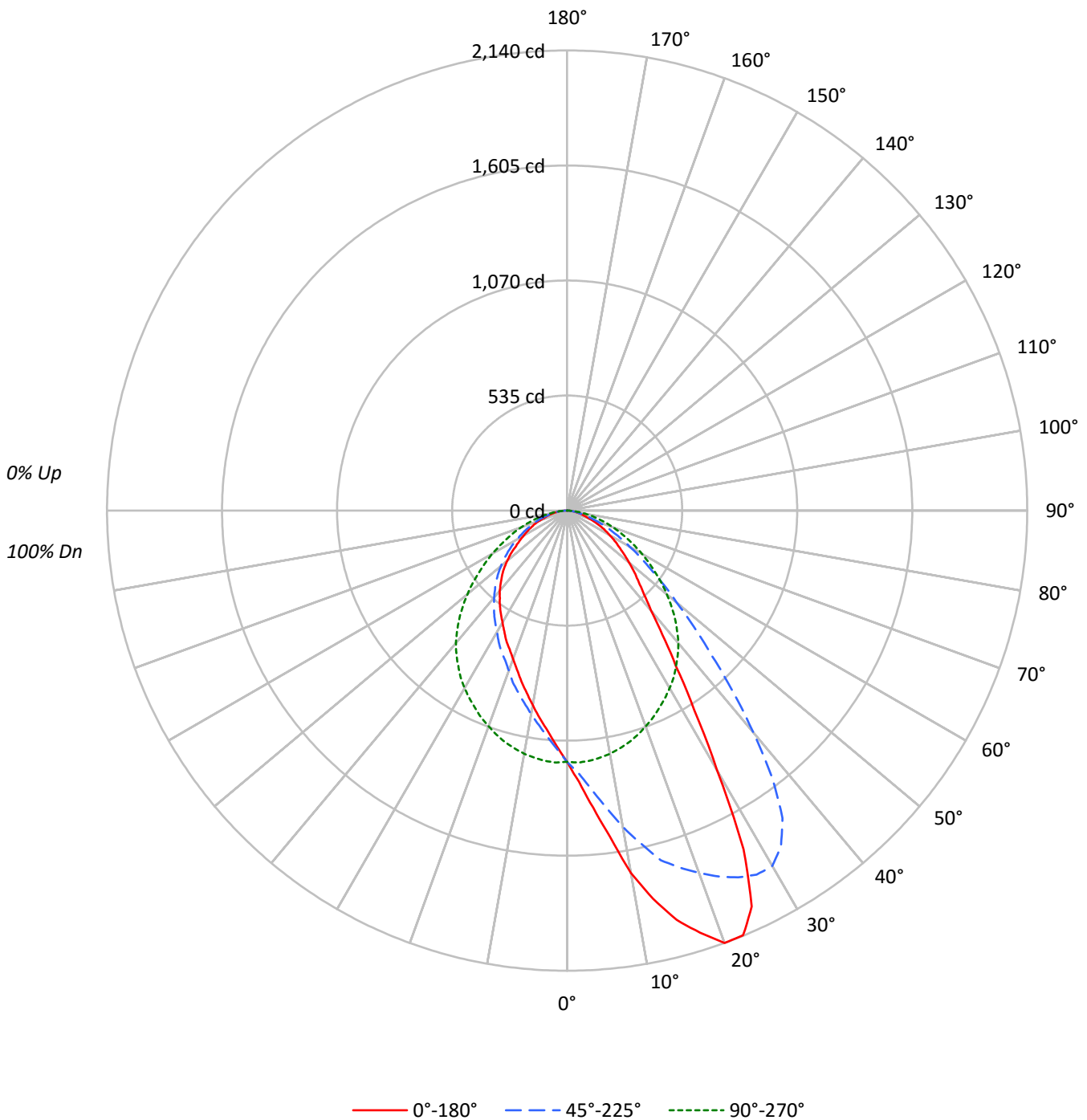
Input Watts (W): 26.3
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P334027

CATALOG NUMBER: S123RDW-S775D835-4F0-1E-UDD-A

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	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					100			
1	110	106	102	99	108	104	100	97	100	97	94	96	93	91	92	90	89					87				
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77					74				
3	93	84	76	71	91	82	75	70	79	74	69	77	72	68	74	70	66					64				
4	86	75	67	61	84	74	66	61	71	65	60	69	64	59	67	62	58					56				
5	80	68	60	53	78	67	59	53	65	58	53	63	57	52	61	56	52					50				
6	74	62	53	47	72	61	53	47	59	52	47	57	51	46	56	50	46					44				
7	69	56	48	42	67	55	48	42	54	47	42	53	46	42	51	46	41					39				
8	64	52	44	38	63	51	43	38	50	43	38	48	42	38	47	42	37					36				
9	60	48	40	35	59	47	40	35	46	39	34	45	39	34	44	38	34					32				
10	57	44	37	32	55	44	36	32	43	36	31	42	36	31	41	35	31					29				

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	12572	12572	12572
5°	14987	12626	11118
10°	18712	12553	10045
15°	21964	12425	9160
20°	24513	12234	8408
25°	24122	12031	7945
30°	17339	11845	7470
35°	11577	11603	7161
40°	8529	11311	6843
45°	7155	10800	6530
50°	6313	10131	6095
55°	5536	9364	5499
60°	4930	8633	5038
65°	4330	7845	4686
70°	3399	7144	4280
75°	2994	6238	3909
80°	2603	5300	3843
85°	2100	4261	4076



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	114.7	3.9
10°-20°	359.1	12.3
20°-30°	565.5	19.4
30°-40°	588.1	20.2
40°-50°	503.1	17.3
50°-60°	383.5	13.2
60°-70°	245.7	8.4
70°-80°	117.7	4.0
80°-90°	31.0	1.1
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°	1039.3	35.7
0°-40°	1627.4	56.0
0°-60°	2514.0	86.4
0°-90°	2908.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2908.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1168	1168	1168	1168	1168	
5°	1387	1301	1168	1055	1029	142
15°	1971	1683	1115	876	822	559
25°	2031	1882	1013	724	669	883
35°	881	1746	883	591	545	573
45°	470	948	710	467	429	369
55°	295	473	499	337	293	266
65°	170	233	308	210	184	167
75°	72	84	150	107	94	77
85°	17	18	34	32	33	20
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1168	1168	1168	1168	1168	1168	1168	1168	1168	1168	1168
2.5°	1263	1265	1259	1258	1250	1248	1248	1238	1231	1223	1218
5°	1387	1395	1391	1382	1367	1364	1354	1339	1322	1301	1291
7.5°	1529	1546	1543	1529	1513	1503	1476	1455	1422	1393	1370
10°	1712	1701	1692	1678	1664	1640	1612	1574	1529	1494	1455
12.5°	1849	1850	1838	1824	1802	1780	1744	1695	1641	1587	1541
15°	1971	1974	1967	1952	1923	1884	1832	1812	1738	1683	1628
17.5°	2058	2059	2057	2038	2006	1979	1931	1885	1815	1741	1667
20°	2140	2135	2136	2114	2092	2059	2012	1938	1883	1793	1717
22.5°	2138	2138	2143	2139	2124	2101	2067	2007	1933	1842	1754
25°	2031	2027	2051	2057	2083	2087	2076	2042	1975	1882	1776
27.5°	1776	1762	1811	1859	1924	1965	2007	2016	1985	1909	1797
30°	1395	1442	1464	1543	1631	1736	1828	1916	1937	1908	1821
32.5°	1099	1139	1156	1221	1302	1429	1579	1712	1816	1851	1807
35°	881	882	924	954	1030	1156	1290	1456	1621	1746	1759
37.5°	727	729	756	786	847	918	1043	1183	1381	1568	1665
40°	607	612	631	660	701	752	844	974	1133	1346	1521
42.5°	530	538	546	567	588	635	705	798	939	1138	1346
45°	470	474	482	492	515	548	598	666	786	948	1150
47.5°	424	422	430	439	455	479	514	572	662	798	973
50°	377	377	382	389	403	420	447	489	557	665	821
52.5°	333	336	339	348	357	370	394	421	477	566	690
55°	295	297	302	307	314	328	343	368	408	473	581
57.5°	262	262	267	268	277	289	301	321	351	403	478
60°	229	228	232	236	240	249	259	278	301	337	399
62.5°	199	199	202	205	209	217	225	238	255	284	330
65°	170	172	173	175	177	182	190	200	212	233	269
67.5°	140	142	143	146	150	153	157	167	176	195	216
70°	108	108	108	110	115	121	127	134	139	152	169
72.5°	89	88	90	90	92	92	96	102	109	117	128
75°	72	72	72	72	74	75	77	78	81	85	94
77.5°	56	56	57	58	58	59	60	61	62	64	69
80°	42	43	42	43	43	44	44	46	46	49	50
82.5°	29	29	29	30	30	31	31	32	32	33	34
85°	17	16	17	17	18	17	17	18	18	19	21
87.5°	5	6	5	6	6	6	6	6	7	7	7
90°	0	0	0	0	0	0	0	0	0	0	0



TEST NUMBER: P334027

CATALOG NUMBER: S123RDW-S775D835-4F0-1E-UDD-A

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1168	1168	1168	1168	1168	1168	1168	1168	1168	1168	1168
2.5°	1216	1214	1207	1199	1189	1182	1176	1173	1164	1153	1146
5°	1281	1266	1250	1230	1212	1194	1182	1169	1152	1134	1121
7.5°	1345	1319	1291	1261	1231	1205	1180	1160	1135	1110	1092
10°	1422	1379	1334	1289	1247	1208	1178	1149	1117	1087	1064
12.5°	1491	1431	1378	1320	1264	1215	1169	1133	1093	1060	1033
15°	1548	1490	1428	1343	1272	1213	1161	1115	1069	1029	1004
17.5°	1607	1519	1437	1371	1279	1208	1146	1093	1043	1002	970
20°	1641	1556	1466	1375	1285	1203	1128	1068	1016	968	939
22.5°	1661	1563	1466	1367	1270	1184	1110	1043	985	940	902
25°	1676	1562	1457	1361	1264	1171	1083	1013	952	903	865
27.5°	1688	1556	1436	1331	1233	1138	1059	984	923	872	831
30°	1691	1549	1410	1295	1194	1109	1024	953	887	833	795
32.5°	1695	1530	1376	1251	1148	1064	989	922	854	800	761
35°	1681	1526	1341	1200	1097	1015	946	883	817	765	725
37.5°	1639	1501	1306	1142	1036	961	903	846	784	727	691
40°	1567	1461	1264	1091	978	901	850	805	746	694	654
42.5°	1461	1407	1224	1037	913	839	798	757	707	654	617
45°	1326	1334	1166	979	854	779	739	710	664	620	581
47.5°	1162	1233	1105	918	790	720	684	658	626	580	545
50°	1002	1115	1028	856	731	661	626	605	578	544	511
52.5°	854	978	935	788	666	604	570	554	534	502	473
55°	721	844	832	719	602	544	518	499	485	461	437
57.5°	605	724	727	642	546	487	465	450	440	421	397
60°	496	604	625	565	485	435	413	401	394	379	362
62.5°	406	494	518	479	426	380	364	353	349	337	322
65°	325	401	424	400	369	332	318	308	304	297	286
67.5°	256	315	340	320	309	282	273	267	263	258	249
70°	196	237	263	259	250	237	231	227	223	219	211
72.5°	148	173	197	201	194	194	189	188	186	181	177
75°	105	124	141	148	151	153	151	150	150	146	143
77.5°	73	85	97	108	112	116	116	118	117	114	113
80°	53	55	63	72	80	83	85	86	85	85	83
82.5°	35	37	39	45	51	57	58	57	59	59	58
85°	21	21	22	23	27	32	34	35	36	36	33
87.5°	8	8	9	9	10	11	14	16	17	15	15
90°	0	0	0	0	0	0	0	0	0	0	0



TEST NUMBER: P334027

CATALOG NUMBER: S123RDW-S775D835-4F0-1E-UDD-A

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1168	1168	1168	1168	1168	1168	1168	1168	1168	1168	1168
2.5°	1143	1137	1132	1122	1116	1109	1102	1106	1106	1105	1105
5°	1110	1098	1088	1074	1066	1055	1047	1046	1048	1041	1037
7.5°	1078	1063	1048	1034	1019	1007	999	996	991	986	982
10°	1045	1026	1012	993	976	961	952	945	942	938	932
12.5°	1010	992	973	951	935	917	911	903	896	892	882
15°	977	953	934	912	894	877	867	852	850	845	836
17.5°	944	918	890	875	857	839	823	818	803	798	790
20°	904	881	860	839	809	793	781	774	763	756	751
22.5°	870	846	821	795	772	753	745	734	729	719	713
25°	837	811	783	756	738	724	710	701	692	688	678
27.5°	798	772	744	723	703	689	676	668	657	649	644
30°	766	734	711	693	665	652	643	633	625	617	611
32.5°	730	701	680	656	636	622	609	600	594	586	581
35°	691	667	644	621	606	591	577	569	563	556	551
37.5°	656	633	612	590	571	559	547	542	533	528	523
40°	624	602	579	558	538	529	518	510	502	498	493
42.5°	589	567	548	525	510	497	487	478	472	467	464
45°	555	535	516	493	478	467	456	448	442	439	433
47.5°	522	501	482	462	447	435	424	418	411	407	403
50°	485	467	447	429	414	402	393	385	379	373	371
52.5°	452	432	415	399	383	369	361	353	348	342	339
55°	414	396	381	364	349	337	327	320	315	308	304
57.5°	380	364	345	331	314	305	297	287	281	275	271
60°	345	326	310	297	283	270	263	255	249	243	240
62.5°	308	292	278	263	250	240	231	225	219	216	213
65°	271	258	243	231	219	211	204	198	194	192	189
67.5°	236	224	210	198	190	183	178	173	171	168	166
70°	203	190	178	169	161	157	154	150	148	144	142
72.5°	166	158	150	143	137	133	129	125	121	117	115
75°	137	128	122	117	113	107	102	97	96	94	94
77.5°	107	101	96	92	87	82	80	79	79	78	78
80°	80	75	71	66	63	63	63	62	63	63	63
82.5°	54	50	48	47	47	48	48	48	48	49	48
85°	31	31	32	32	32	32	33	33	33	32	33
87.5°	14	16	16	17	17	17	17	17	18	18	18
90°	0	0	0	0	0	0	0	0	0	0	0



TEST NUMBER: P334027

CATALOG NUMBER: S123RDW-S775D835-4F0-1E-UDD-A

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	1168	1168	1168	1168
2.5°	1099	1099	1099	1097
5°	1036	1035	1034	1029
7.5°	978	977	973	974
10°	928	929	923	919
12.5°	880	877	872	868
15°	838	833	821	822
17.5°	787	783	782	775
20°	743	740	741	734
22.5°	708	706	700	699
25°	675	671	667	669
27.5°	641	638	633	633
30°	609	606	604	601
32.5°	576	576	572	572
35°	549	546	545	545
37.5°	522	518	516	514
40°	493	489	488	487
42.5°	461	460	459	457
45°	432	431	428	429
47.5°	401	398	397	398
50°	369	368	363	364
52.5°	337	332	331	330
55°	301	296	294	293
57.5°	265	264	262	263
60°	235	235	235	234
62.5°	211	210	209	210
65°	187	187	185	184
67.5°	165	163	163	162
70°	140	139	136	136
72.5°	112	111	111	110
75°	93	93	92	94
77.5°	78	78	78	77
80°	63	63	62	62
82.5°	47	48	48	47
85°	33	33	34	33
87.5°	19	18	18	18
90°	0	0	0	0

(END OF REPORT)