

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: P242743

Luminaire Tested: **S124RDR-S795D835-X4F0-XX-UDD-A-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P242743  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-31)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S124RDR-S795D835-X4F0-XX-UDD-A-W  
Description: DEFINE 4 REGRESSED DIRECT RECESSED WITH ASYMMETRIC FLUSH DIFFUSER  
STANDARD LIGHT ENGINE  
Light Source: (92) 3500K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3137.1 lumens  
Efficiency: N/A  
Efficacy: 119.3 lumens/watt  
Spacing Criteria (0/90/45): 1.27 / 1.22 / 1.39  
Luminous Opening: Rectangular (W 3.88' x L: 0.31' x H: 0')  
CIE Type: Direct

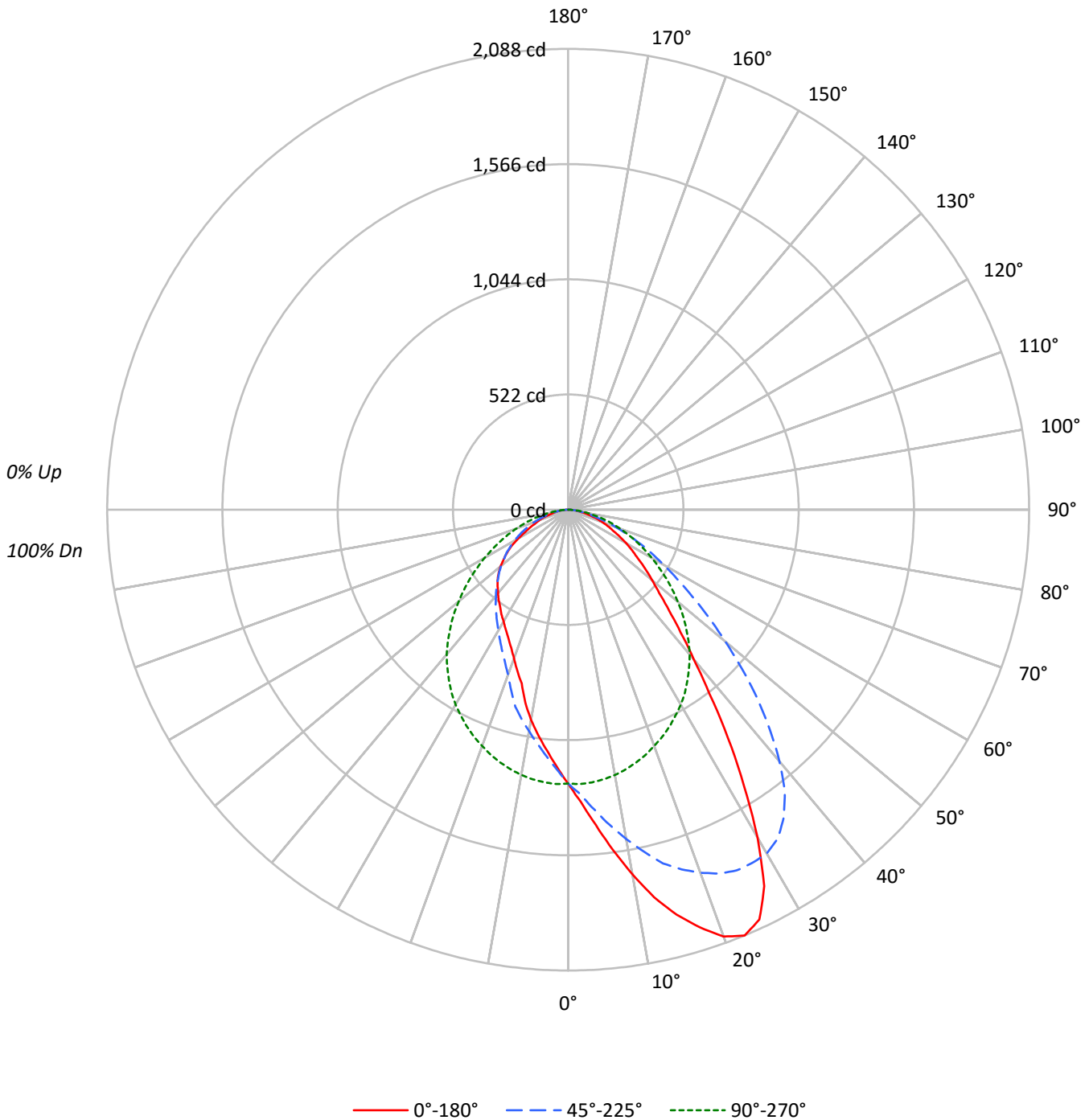
Input Watts (W): 26.3  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86
2	101	93	87	82	98	92	86	81	88	83	79	85	81	77	82	79	76	74
3	93	83	76	70	90	81	75	69	79	73	68	76	71	67	73	69	65	63
4	85	74	66	60	83	73	65	59	71	64	59	68	63	58	66	61	57	55
5	79	67	58	52	77	66	58	52	64	57	51	62	56	51	60	55	50	48
6	73	61	52	46	71	60	52	46	58	51	46	56	50	45	55	49	45	43
7	68	55	47	41	66	54	47	41	53	46	41	52	45	40	50	44	40	38
8	64	51	42	37	62	50	42	37	49	42	37	47	41	36	46	40	36	34
9	59	47	39	33	58	46	38	33	45	38	33	44	38	33	43	37	33	31
10	56	43	35	30	55	43	35	30	42	35	30	41	34	30	40	34	30	28

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°
0°	11031	11031	11031
5°	12795	11064	9779
10°	15137	11016	8728
15°	17485	10914	7500
20°	19467	10774	6782
25°	20096	10637	6297
30°	17593	10469	6004
35°	13694	10222	5827
40°	10269	9939	5732
45°	8108	9485	5682
50°	6845	8961	5518
55°	5966	8384	5223
60°	5369	7787	4622
65°	4732	7141	3975
70°	4262	6471	3587
75°	3572	5735	3057
80°	3020	4889	2867
85°	2550	3825	2550



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	120.2	3.8
10°-20°	362.9	11.6
20°-30°	568.4	18.1
30°-40°	631.2	20.1
40°-50°	559.4	17.8
50°-60°	435.9	13.9
60°-70°	285.1	9.1
70°-80°	139.9	4.5
80°-90°	34.1	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°	1051.5	33.5
0°-40°	1682.7	53.6
0°-60°	2678.0	85.4
0°-90°	3137.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3137.1	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1241	1241	1241	1241	1241	
5°	1434	1365	1240	1122	1096	144
15°	1900	1659	1186	924	815	540
25°	2049	1804	1084	706	642	915
35°	1262	1702	942	568	537	790
45°	645	1212	754	452	452	509
55°	385	686	541	340	337	350
65°	225	352	340	220	189	226
75°	104	134	167	107	89	114
85°	25	27	38	26	25	29
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°	1241	1241	1241	1241	1241	1241	1241	1241	1241	1241	1241
2.5°	1326	1331	1326	1326	1321	1319	1317	1311	1299	1292	1293
5°	1434	1447	1440	1439	1428	1417	1410	1394	1377	1365	1356
7.5°	1554	1562	1557	1551	1532	1526	1510	1491	1462	1441	1421
10°	1677	1683	1681	1668	1655	1629	1614	1584	1546	1515	1487
12.5°	1798	1805	1783	1787	1760	1740	1714	1675	1629	1588	1550
15°	1900	1892	1892	1882	1855	1826	1801	1762	1706	1659	1610
17.5°	1984	1988	1984	1958	1938	1909	1865	1820	1772	1709	1660
20°	2058	2058	2054	2038	2010	1978	1929	1880	1814	1750	1693
22.5°	2088	2090	2085	2072	2048	2017	1977	1927	1858	1785	1711
25°	2049	2059	2060	2056	2049	2030	1994	1943	1882	1804	1728
27.5°	1923	1936	1941	1952	1972	1980	1975	1941	1882	1805	1730
30°	1714	1724	1757	1799	1832	1862	1888	1895	1865	1798	1718
32.5°	1482	1497	1529	1576	1636	1692	1759	1794	1801	1767	1694
35°	1262	1272	1302	1350	1416	1492	1584	1656	1705	1702	1656
37.5°	1051	1065	1096	1135	1200	1297	1384	1481	1569	1612	1589
40°	885	886	915	956	1016	1098	1195	1305	1406	1489	1505
42.5°	754	754	771	816	855	931	1023	1132	1254	1353	1402
45°	645	650	666	692	726	791	866	967	1100	1213	1283
47.5°	559	567	577	601	629	674	738	833	943	1068	1166
50°	495	496	509	521	545	579	633	709	808	928	1039
52.5°	440	440	446	462	480	505	546	614	699	803	919
55°	385	388	394	406	420	439	474	526	595	686	791
57.5°	343	345	350	355	369	383	411	448	509	585	688
60°	302	303	304	312	322	335	353	383	432	501	578
62.5°	262	263	266	271	278	286	305	328	366	422	490
65°	225	226	229	231	238	246	259	276	304	353	405
67.5°	194	194	194	197	202	208	217	231	253	285	334
70°	164	164	165	167	169	174	178	188	204	228	264
72.5°	136	137	138	138	139	142	145	151	161	178	205
75°	104	106	108	110	113	112	116	120	123	134	151
77.5°	82	81	81	83	84	84	87	90	93	99	105
80°	59	59	61	61	61	61	64	65	66	68	74
82.5°	41	42	41	42	42	43	45	45	46	46	48
85°	25	26	26	25	25	25	26	27	28	27	28
87.5°	11	11	11	11	12	11	12	13	12	12	12
90°	0	0	0	0	0	0	0	0	0	0	0



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1241	1241	1241	1241	1241	1241	1241	1241	1241	1241	1241
2.5°	1288	1281	1278	1270	1260	1255	1251	1244	1236	1227	1220
5°	1344	1332	1317	1299	1283	1267	1254	1240	1225	1209	1193
7.5°	1399	1377	1354	1327	1300	1276	1254	1232	1208	1186	1165
10°	1457	1425	1389	1352	1314	1282	1250	1221	1189	1160	1136
12.5°	1504	1465	1420	1371	1324	1283	1245	1205	1168	1136	1102
15°	1557	1505	1448	1392	1333	1280	1230	1186	1145	1101	1071
17.5°	1593	1534	1466	1401	1334	1272	1216	1165	1117	1074	1038
20°	1625	1558	1480	1404	1326	1259	1197	1139	1090	1042	1004
22.5°	1643	1567	1480	1399	1318	1244	1175	1114	1059	1011	968
25°	1644	1564	1478	1386	1298	1220	1150	1085	1025	977	933
27.5°	1640	1548	1461	1367	1277	1194	1122	1052	993	942	897
30°	1628	1527	1432	1334	1242	1164	1086	1020	958	904	859
32.5°	1602	1502	1398	1297	1204	1122	1050	983	922	867	818
35°	1566	1465	1354	1251	1159	1075	1006	942	884	825	774
37.5°	1525	1419	1309	1196	1105	1025	961	899	842	789	732
40°	1461	1366	1252	1140	1046	970	911	857	799	746	690
42.5°	1383	1306	1191	1078	986	913	859	806	755	704	645
45°	1295	1234	1126	1018	925	852	802	755	709	660	604
47.5°	1197	1152	1058	945	858	791	743	704	663	614	564
50°	1094	1068	978	877	794	734	684	648	616	569	525
52.5°	984	973	901	805	726	667	627	595	562	525	485
55°	872	880	815	732	657	607	568	541	513	480	449
57.5°	756	784	736	661	588	541	512	488	464	436	408
60°	653	676	652	587	526	483	456	438	415	390	369
62.5°	553	578	566	517	461	426	403	387	371	350	328
65°	473	489	482	446	405	374	352	340	324	308	289
67.5°	378	410	405	385	346	321	305	294	279	267	254
70°	298	326	326	310	291	268	258	249	236	225	214
72.5°	230	256	261	250	238	222	213	207	195	188	180
75°	171	190	195	195	189	180	171	167	158	151	146
77.5°	120	133	141	142	143	139	131	128	121	119	113
80°	79	87	96	99	102	101	98	96	89	87	85
82.5°	49	52	59	67	65	69	66	65	60	60	58
85°	29	29	30	35	37	38	39	38	36	36	33
87.5°	12	12	13	13	13	15	17	17	16	14	13
90°	0	0	0	0	0	0	0	0	0	0	0



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**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1241	1241	1241	1241	1241	1241	1241	1241	1241	1241	1241
2.5°	1213	1208	1202	1194	1185	1177	1174	1177	1178	1174	1174
5°	1182	1169	1159	1144	1132	1122	1115	1112	1113	1105	1103
7.5°	1147	1133	1117	1100	1084	1070	1062	1059	1050	1047	1041
10°	1113	1093	1077	1056	1037	1020	1011	1004	996	992	983
12.5°	1079	1055	1037	1015	995	973	965	951	936	927	915
15°	1047	1019	997	971	948	924	903	879	870	851	840
17.5°	1009	980	956	922	888	859	835	810	796	783	778
20°	971	945	908	868	828	795	777	762	747	738	732
22.5°	936	901	856	812	772	748	733	718	706	698	690
25°	895	852	806	756	729	707	690	677	670	659	655
27.5°	856	803	752	718	690	668	653	644	634	627	621
30°	809	755	710	678	650	633	621	610	602	597	593
32.5°	762	709	673	638	617	600	587	580	574	567	565
35°	718	670	637	606	583	568	558	550	545	543	541
37.5°	674	635	598	573	552	540	527	523	520	515	517
40°	633	597	565	538	522	509	502	497	494	494	494
42.5°	598	562	532	508	492	481	473	469	469	468	471
45°	561	528	497	477	463	452	447	444	444	446	446
47.5°	524	493	468	445	432	425	421	419	419	421	423
50°	490	460	435	415	403	397	393	392	393	393	397
52.5°	454	427	403	387	373	367	366	364	365	367	368
55°	418	394	371	355	345	341	336	337	336	337	337
57.5°	382	361	338	325	317	311	306	307	306	306	305
60°	348	324	307	295	285	280	276	277	275	274	272
62.5°	310	291	275	264	257	251	246	245	241	237	232
65°	274	258	243	233	225	221	217	214	207	199	195
67.5°	239	227	213	204	198	192	185	180	172	167	165
70°	205	193	182	173	167	161	154	150	145	143	141
72.5°	172	162	151	144	137	133	127	124	122	122	119
75°	139	131	123	116	110	107	105	102	101	97	94
77.5°	107	101	96	91	87	85	80	76	74	72	71
80°	79	75	70	67	62	60	58	57	57	56	56
82.5°	55	51	46	44	44	43	42	41	41	41	41
85°	30	28	28	28	27	27	26	26	26	26	26
87.5°	13	12	12	11	12	12	11	11	12	11	11
90°	0	0	0	0	0	0	0	0	0	0	0





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**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
0°	1241	1241	1241	1241
2.5°	1171	1172	1168	1167
5°	1099	1098	1096	1096
7.5°	1037	1034	1036	1032
10°	981	976	971	967
12.5°	905	900	894	896
15°	833	826	814	815
17.5°	769	770	763	765
20°	722	718	719	717
22.5°	689	684	680	676
25°	651	648	643	642
27.5°	617	617	615	612
30°	589	588	587	585
32.5°	563	563	562	562
35°	539	539	538	537
37.5°	517	518	517	517
40°	493	494	495	494
42.5°	474	474	475	473
45°	450	453	452	452
47.5°	424	428	428	428
50°	399	398	400	399
52.5°	369	369	369	368
55°	337	338	337	337
57.5°	304	302	303	302
60°	267	263	262	260
62.5°	226	224	220	222
65°	191	189	187	189
67.5°	162	161	161	160
70°	141	139	139	138
72.5°	119	117	118	117
75°	91	89	89	89
77.5°	71	71	72	70
80°	56	55	55	56
82.5°	40	40	40	42
85°	26	25	26	25
87.5°	12	11	11	11
90°	0	0	0	0

(END OF REPORT)