

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: G3-1802-639-64

Luminaire Tested: **S123RDR-H775D835-X4F0-XX-UDD-F-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: G3-1802-639-64
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123RDR-H775D835-X4F0-XX-UDD-F-W
Description: DEFINE 3 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2939.7 lumens
Efficiency: N/A
Efficacy: 114.8 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.07 / 1.22
Luminous Opening: Rectangular (W 0.25' x L: 3.9' x H: 0')
CIE Type: Direct

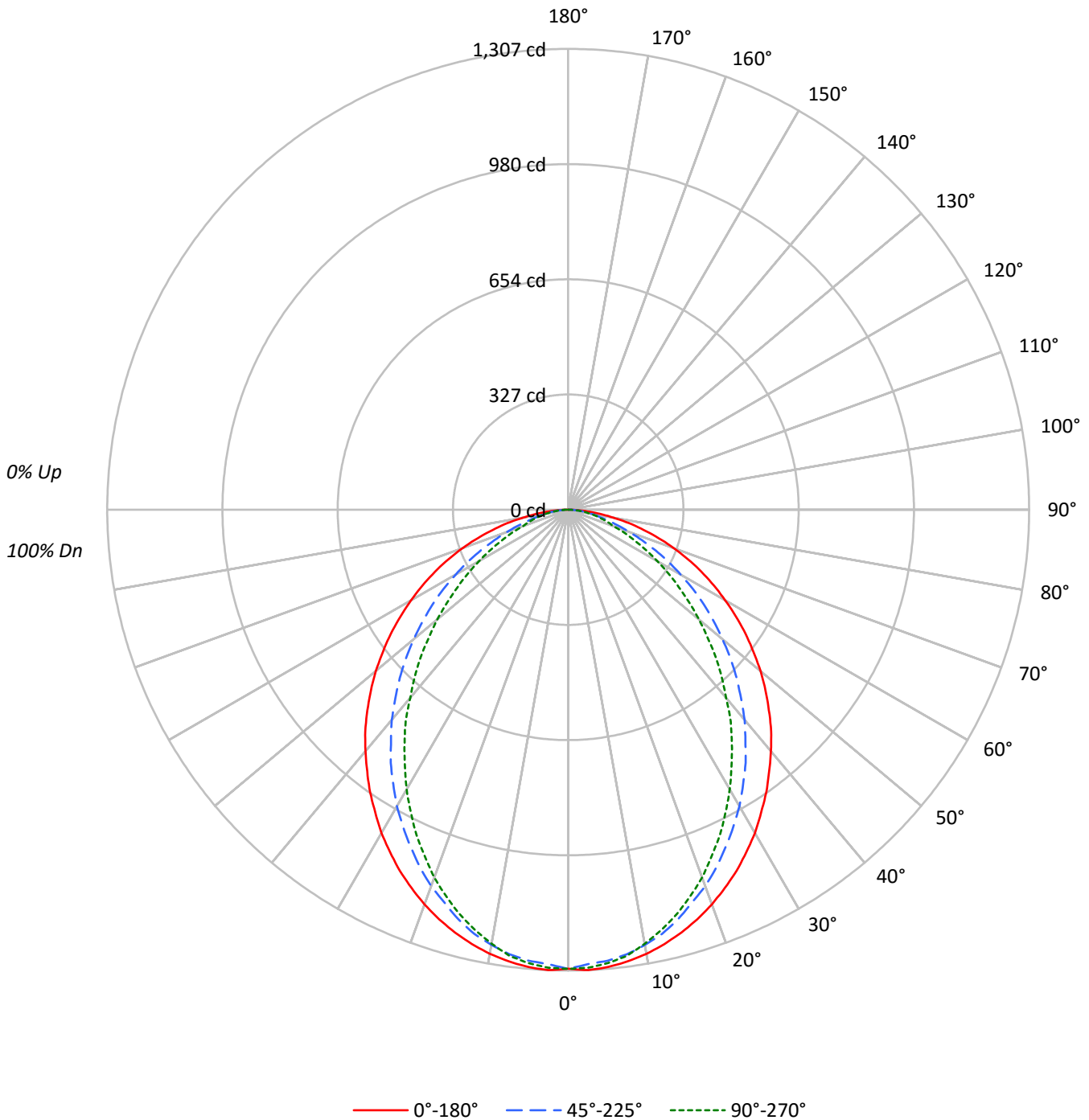
Input Watts (W): 25.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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	105	101	98	107	103	99	96	99	96	93	95	93	90	91	89	88					86				
2	101	93	87	81	98	91	85	80	87	83	78	84	80	77	81	78	75					73				
3	92	82	75	69	90	81	74	68	78	72	67	75	70	66	73	68	65					62				
4	85	73	65	59	83	72	64	58	70	63	58	67	62	57	65	60	56					54				
5	78	66	58	51	76	65	57	51	63	56	50	61	55	50	59	54	49					47				
6	73	60	51	45	71	59	51	45	57	50	45	56	49	44	54	48	44					42				
7	67	55	46	40	66	54	46	40	52	45	40	51	44	40	49	44	39					37				
8	63	50	42	36	61	49	41	36	48	41	36	47	40	36	46	40	35					34				
9	59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32					30				
10	55	43	35	30	54	42	35	30	41	34	30	40	34	30	39	34	29					28				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	14389	14389	14389
5°	14444	14245	14322
10°	14353	14061	14028
15°	14199	13764	13593
20°	14007	13360	13055
25°	13779	12877	12414
30°	13514	12391	11689
35°	13208	11832	10915
40°	12898	11224	10056
45°	12582	10550	9253
50°	12242	9817	8322
55°	11831	9056	7380
60°	11361	8156	6432
65°	10905	7139	5492
70°	10276	5978	4395
75°	9480	4740	4185
80°	8274	4201	3819
85°	6974	3677	3551



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	122.5	4.2
10°-20°	341.0	11.6
20°-30°	490.9	16.7
30°-40°	553.0	18.8
40°-50°	528.3	18.0
50°-60°	431.9	14.7
60°-70°	290.1	9.9
70°-80°	144.7	4.9
80°-90°	37.4	1.3
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°	954.4	32.5
0°-40°	1507.3	51.3
0°-60°	2467.5	83.9
0°-90°	2939.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2939.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1302	1302	1302	1302	1302	
5°	1302	1297	1284	1294	1291	124
15°	1241	1232	1203	1196	1188	350
25°	1130	1105	1056	1033	1018	520
35°	979	941	877	828	809	612
45°	805	757	675	616	592	621
55°	614	559	470	405	383	548
65°	417	359	273	223	210	412
75°	222	169	111	100	98	235
85°	55	32	29	27	28	64
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	1302	1302	1302	1302	1302	1302	1302	1302	1302	1302	1302
2.5°	1307	1304	1300	1301	1302	1303	1303	1302	1299	1295	1290
5°	1302	1299	1295	1295	1297	1297	1297	1296	1293	1289	1284
7.5°	1292	1290	1285	1286	1287	1287	1287	1286	1282	1277	1272
10°	1279	1276	1272	1272	1273	1273	1273	1271	1266	1260	1253
12.5°	1262	1259	1255	1255	1255	1255	1255	1252	1244	1238	1232
15°	1241	1238	1234	1234	1233	1232	1230	1225	1218	1211	1203
17.5°	1218	1214	1209	1208	1207	1206	1203	1200	1190	1180	1168
20°	1191	1187	1182	1181	1178	1175	1173	1167	1156	1144	1136
22.5°	1161	1157	1152	1150	1144	1142	1139	1130	1118	1107	1098
25°	1130	1125	1119	1116	1109	1105	1104	1091	1079	1067	1056
27.5°	1094	1090	1085	1079	1072	1067	1065	1053	1038	1024	1014
30°	1059	1053	1048	1041	1031	1026	1022	1010	997	980	971
32.5°	1018	1014	1008	1001	991	987	981	966	949	937	923
35°	979	975	966	959	945	941	935	922	903	889	877
37.5°	936	931	924	914	902	897	889	876	854	840	825
40°	894	887	879	868	856	851	844	825	807	791	778
42.5°	852	844	834	824	811	804	796	778	758	743	725
45°	805	799	789	777	762	757	748	729	709	693	675
47.5°	759	752	742	730	715	708	699	680	660	640	624
50°	712	705	693	681	667	658	650	631	609	591	571
52.5°	662	656	646	634	616	609	601	580	559	538	520
55°	614	610	598	586	567	559	551	529	508	487	470
57.5°	564	561	549	535	518	510	500	478	458	437	419
60°	514	511	499	485	469	459	448	431	408	389	369
62.5°	466	462	452	437	419	409	399	379	358	338	320
65°	417	412	400	385	368	359	349	330	309	290	273
67.5°	368	363	350	338	318	309	300	281	261	242	226
70°	318	313	303	287	270	261	252	232	214	200	185
72.5°	269	265	255	240	224	215	205	188	172	157	146
75°	222	216	207	193	177	169	162	145	130	120	111
77.5°	177	170	160	149	134	126	119	105	95	88	86
80°	130	129	119	107	94	88	81	72	69	68	66
82.5°	91	87	79	68	58	54	52	50	48	48	46
85°	55	51	44	35	33	32	31	31	30	29	29
87.5°	24	20	15	14	13	13	14	14	14	13	13
90°	0	0	0	0	0	0	0	0	0	0	0



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CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
0°	1302	1302	1302	1302	1302	1302	1302	1302	1302	1302
2.5°	1292	1297	1300	1301	1301	1301	1302	1302	1301	1300
5°	1285	1290	1292	1294	1294	1294	1294	1294	1293	1291
7.5°	1274	1277	1280	1279	1279	1278	1277	1278	1276	1276
10°	1254	1257	1259	1256	1256	1257	1257	1256	1253	1250
12.5°	1231	1234	1231	1232	1230	1228	1227	1226	1223	1221
15°	1201	1201	1199	1199	1196	1192	1191	1192	1188	1188
17.5°	1168	1166	1163	1161	1160	1160	1156	1156	1151	1150
20°	1132	1130	1127	1122	1120	1121	1117	1114	1111	1110
22.5°	1094	1089	1086	1081	1077	1077	1074	1069	1066	1063
25°	1051	1046	1040	1036	1033	1028	1026	1022	1019	1018
27.5°	1007	999	991	987	985	979	976	974	968	967
30°	960	954	944	937	932	933	926	922	919	916
32.5°	915	905	895	886	880	879	872	868	865	862
35°	864	854	842	834	828	825	818	816	811	809
37.5°	813	802	790	780	776	769	766	761	757	757
40°	763	750	738	726	721	717	709	705	700	697
42.5°	711	696	685	674	667	664	655	650	645	644
45°	659	644	630	619	616	610	601	594	593	592
47.5°	606	591	578	566	562	555	549	544	538	535
50°	555	540	526	513	508	502	496	489	487	484
52.5°	504	487	472	460	456	451	444	438	435	433
55°	452	435	422	410	405	402	394	389	385	383
57.5°	401	384	372	363	356	353	345	340	338	337
60°	353	337	324	315	309	306	300	295	292	291
62.5°	305	291	279	270	266	262	257	253	250	250
65°	259	245	234	227	223	221	215	213	210	210
67.5°	214	204	196	187	184	184	178	176	174	174
70°	175	166	157	152	149	148	143	140	138	136
72.5°	137	129	121	120	120	119	119	117	117	118
75°	105	103	101	101	100	99	99	98	98	98
77.5°	84	83	82	81	81	80	79	79	79	79
80°	64	63	63	62	61	62	61	61	60	60
82.5°	45	45	45	44	44	44	44	43	43	44
85°	28	28	28	28	27	28	27	27	27	28
87.5°	12	13	12	13	13	12	12	12	12	12
90°	0	0	0	0	0	0	0	0	0	0

(END OF REPORT)