

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P735923

Luminaire Tested: S122RDR-S485D940-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

Test Information

Test Method: LM-79-2019
Report Number: P735923
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2308-143-2)
Test Lab: INNOVATION CENTER
Issue Date: 1/24/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122RDR-S485D940-X4F0-XX-UDD-W-W
Description: DEFINE 2 REGRESSED DIRECT RECESSED WITH WALL WASH OPTIC
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1834.9 lumens
Efficiency: N/A
Efficacy: 93.6 lumens/watt
Spacing Criteria (0/90/45): 0.82 / 1.11 / 1
Luminous Opening: Rectangular (W 4' x L: 0.14' x H: 0')
CIE Type: Direct

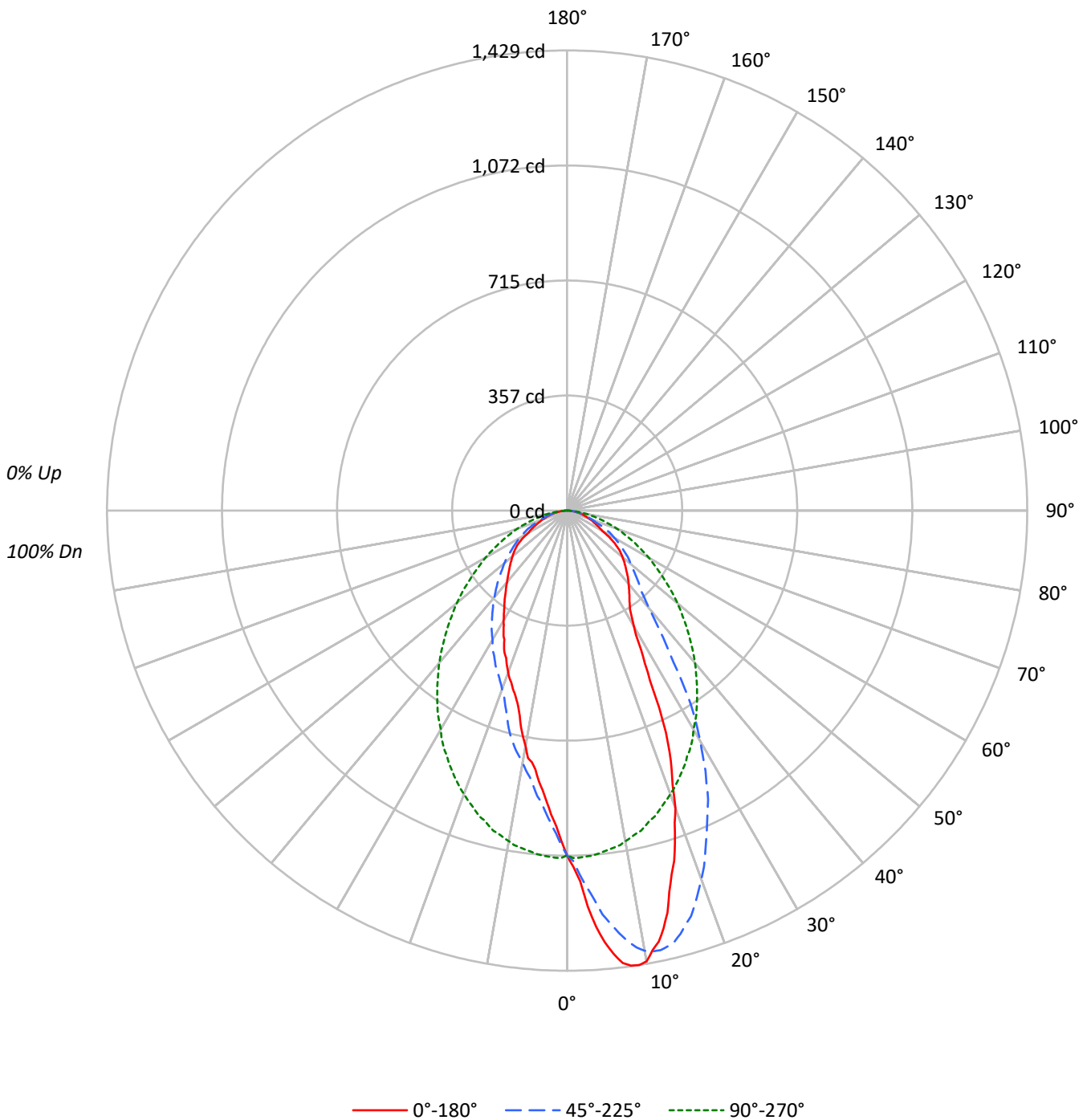
Input Watts (W): 19.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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	103	99	108	104	101	98	100	97	95	96	94	92	92	91	89	87																												
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	75																												
3	94	85	78	72	92	83	77	71	80	75	70	78	73	69	75	71	68	66																												
4	87	77	69	63	85	75	68	62	73	67	62	71	65	61	69	64	60	58																												
5	81	69	61	55	79	68	61	55	66	60	55	64	59	54	63	58	54	52																												
6	75	63	55	50	74	63	55	49	61	54	49	59	53	49	58	52	48	46																												
7	71	58	50	45	69	57	50	45	56	49	44	55	49	44	53	48	44	42																												
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38																												
9	62	50	42	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35																												
10	59	46	39	34	57	46	39	34	45	39	34	44	38	34	43	38	34	32																												

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	20584	20584	20584	20584	20584
5°	25967	24290	20663	17556	16810
10°	27739	27085	20347	15534	14515
15°	24397	27075	19810	13930	12097
20°	20113	24920	19178	12091	10945
25°	14339	21879	18409	11198	9847
30°	9175	18351	17423	10276	8747
35°	7903	13523	16515	9534	7933
40°	7450	9889	15494	8822	7287
45°	7038	8473	14407	8174	6880
50°	6701	7721	13382	7607	6624
55°	6149	7141	12235	6990	6387
60°	4851	6512	11237	6558	5397
65°	4394	5826	10192	6090	4921
70°	4052	4704	9262	5249	4524
75°	3780	4255	8080	4686	4255
80°	3498	3852	6841	4206	3852
85°	3132	3418	5249	3683	3418

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 20164 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	103.9	5.7
10°-20°	279.1	15.2
20°-30°	350.1	19.1
30°-40°	333.5	18.2
40°-50°	294.2	16.0
50°-60°	231.5	12.6
60°-70°	147.7	8.0
70°-80°	75.1	4.1
80°-90°	19.9	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°	733.0	39.9
0°-40°	1066.5	58.1
0°-60°	1592.2	86.8
0°-90°	1834.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1834.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1071	1071	1071	1071	1071	
5°	1346	1259	1071	910	871	131
15°	1226	1361	996	700	608	340
25°	676	1032	868	528	464	305
35°	337	576	704	406	338	214
45°	259	312	530	301	253	201
55°	184	213	365	209	191	161
65°	97	128	224	134	108	97
75°	51	57	109	63	57	54
85°	14	16	24	17	16	16
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	1070.9	1070.9	1070.9	1070.9	1070.9	1070.9	1070.9	1070.9	1070.9
1°	1106.9	1112.1	1088.2	1090.8	1079.2	1058.6	1038.7	1040.6	1026.4
2°	1151.4	1164.9	1132.0	1112.1	1078.6	1042.5	1002.6	997.5	980.1
3°	1231.8	1225.4	1171.3	1130.7	1076.0	1021.9	971.7	960.1	945.3
4°	1296.9	1277.6	1211.2	1154.6	1074.7	998.1	941.4	921.5	906.7
5°	1345.8	1321.4	1258.9	1172.6	1070.9	984.6	909.9	887.3	871.2
6°	1385.1	1366.4	1289.8	1189.3	1065.7	964.6	891.2	860.9	844.2
7°	1415.4	1399.9	1321.4	1211.9	1061.2	944.7	861.6	830.0	810.1
8°	1427.0	1419.9	1350.3	1228.0	1056.1	930.5	835.2	806.8	788.8
9°	1428.9	1429.5	1373.5	1243.4	1051.5	904.7	816.5	787.5	777.9
10°	1421.2	1427.0	1387.7	1260.8	1042.5	891.8	795.9	768.2	743.7
11°	1390.9	1416.7	1394.8	1272.4	1034.8	871.2	777.9	741.8	717.3
12°	1368.4	1392.8	1395.4	1287.2	1025.8	861.6	762.4	714.1	688.4
13°	1331.0	1356.8	1389.0	1291.1	1020.6	837.8	743.1	685.8	654.2
14°	1286.6	1327.8	1378.7	1299.5	1007.8	817.2	723.8	645.9	627.2
15°	1226.0	1284.6	1360.6	1302.7	995.5	803.0	700.0	625.9	607.9
16°	1175.8	1242.1	1336.2	1302.7	987.8	783.7	674.2	608.5	590.5
17°	1137.8	1191.9	1316.2	1303.3	974.9	770.1	648.4	592.4	578.3
18°	1084.4	1144.9	1284.6	1300.7	961.4	754.0	626.5	578.9	561.5
19°	1025.1	1097.3	1251.2	1296.2	949.8	737.3	603.4	564.7	549.9
20°	983.3	1049.6	1218.3	1289.2	937.6	726.4	591.1	548.6	535.1
21°	913.1	994.2	1185.5	1279.5	924.7	707.7	574.4	534.5	519.7
22.5°	841.6	916.3	1125.0	1263.4	903.4	684.5	555.7	517.1	495.2
23°	813.9	897.6	1106.3	1258.9	896.4	678.7	549.9	509.4	490.0
24°	754.7	841.6	1067.6	1244.7	880.9	659.4	539.0	493.9	480.4
25°	676.1	794.0	1031.6	1229.9	868.0	645.2	528.0	481.7	464.3
26°	587.3	728.9	998.7	1211.9	850.0	625.9	513.2	470.1	445.6
27°	532.5	672.9	954.3	1192.6	837.1	611.7	501.0	452.7	435.3
28°	488.7	584.7	914.4	1173.9	821.7	594.4	492.6	440.5	419.8
29°	441.1	536.4	867.4	1148.8	804.9	574.4	479.1	428.2	406.3
30°	413.4	484.9	826.8	1130.1	785.0	560.9	463.0	416.0	394.1
32.5°	363.2	399.9	716.7	1076.7	747.0	522.2	436.6	382.5	363.8
35°	336.8	356.1	576.3	1014.2	703.8	490.0	406.3	354.8	338.1
37.5°	316.8	328.4	475.9	947.2	660.0	461.7	378.6	329.1	313.0
40°	296.9	305.9	394.1	882.8	617.5	434.0	351.6	302.6	290.4
42.5°	278.8	285.9	341.9	819.1	573.7	405.7	325.2	282.0	271.1
45°	258.9	265.3	311.7	741.8	530.0	376.7	300.7	259.5	253.1
47.5°	242.1	246.6	282.7	672.9	486.8	349.0	275.6	241.5	237.0
50°	224.1	229.9	258.2	596.3	447.5	322.0	254.4	225.4	221.5
52.5°	206.7	209.3	237.6	519.7	406.3	295.6	231.8	209.3	206.7
55°	183.5	193.8	213.1	441.1	365.1	271.1	208.6	192.5	190.6
57.5°	157.1	170.6	191.2	370.3	326.5	244.1	190.0	177.1	168.7
60°	126.2	142.3	169.4	307.8	292.3	219.6	170.6	150.7	140.4
62.5°	110.8	115.9	149.4	257.6	257.6	196.4	151.3	129.4	124.9
65°	96.6	100.5	128.1	213.1	224.1	170.6	133.9	112.0	108.2



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	84.4	87.6	97.9	177.7	193.2	148.7	110.8	97.9	93.4
70°	72.1	74.7	83.7	144.9	164.8	126.9	93.4	83.7	80.5
72.5°	61.2	63.7	68.9	108.8	135.2	105.6	78.6	71.5	68.9
75°	50.9	52.2	57.3	81.1	108.8	84.4	63.1	58.6	57.3
77.5°	41.2	41.9	45.1	58.0	84.4	64.4	50.9	47.0	46.4
80°	31.6	32.2	34.8	41.9	61.8	46.4	38.0	36.1	34.8
82.5°	22.5	23.2	24.5	28.3	41.9	31.6	27.0	26.4	24.5
85°	14.2	14.2	15.5	17.4	23.8	18.0	16.7	16.1	15.5
87.5°	6.4	6.4	7.1	7.1	10.9	7.7	7.7	7.1	6.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)