

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: P735916

Luminaire Tested: S122RDR-S485D830-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P735916  
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-S485D830-X4F0-XX-UDD-W-W  
Description: DEFINE 2 REGRESSED DIRECT RECESSED WITH WALL WASH OPTIC  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1939.5 lumens  
Efficiency: N/A  
Efficacy: 99.0 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

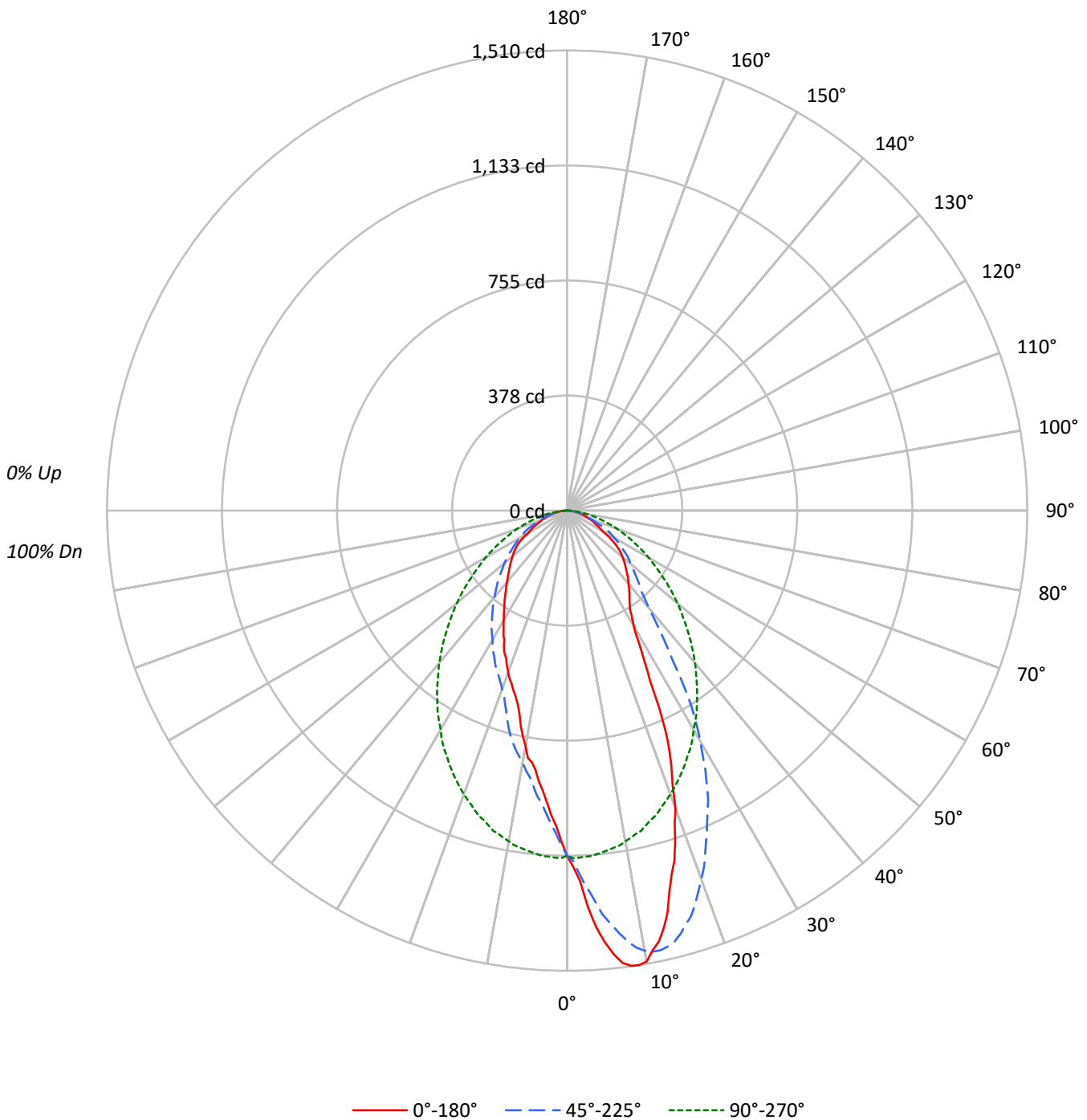
Input Watts (W): 19.6  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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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	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	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°	21757	21757	21757	21757	21757
5°	27447	25675	21840	18556	17768
10°	29320	28629	21509	16420	15343
15°	25788	28619	20940	14724	12785
20°	21259	26342	20271	12780	11569
25°	15158	23126	19459	11836	10407
30°	9699	19396	18415	10862	9246
35°	8353	14295	17455	10078	8384
40°	7874	10453	16377	9324	7703
45°	7437	8954	15228	8641	7271
50°	7084	8161	14144	8041	7000
55°	6501	7550	12932	7389	6753
60°	5128	6881	11879	6935	5705
65°	4644	6158	10775	6440	5199
70°	4282	4974	9790	5547	4783
75°	3995	4500	8541	4953	4500
80°	3697	4073	7228	4450	4073
85°	3308	3595	5558	3904	3595

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 67.5°  
 Vertical Angle: 45°  
 Luminance: 21314 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	109.8	5.7
10°-20°	295.0	15.2
20°-30°	370.0	19.1
30°-40°	352.5	18.2
40°-50°	311.0	16.0
50°-60°	244.7	12.6
60°-70°	156.1	8.0
70°-80°	79.4	4.1
80°-90°	21.0	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°	774.8	39.9
0°-40°	1127.3	58.1
0°-60°	1683.0	86.8
0°-90°	1939.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1939.5	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1132	1132	1132	1132	1132	
5°	1422	1331	1132	962	921	138
15°	1296	1438	1052	740	642	359
25°	715	1090	918	558	491	322
35°	356	609	744	430	357	226
45°	274	329	560	318	268	212
55°	194	225	386	220	202	170
65°	102	135	237	142	114	102
75°	54	61	115	67	61	57
85°	15	16	25	18	16	17
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°	1131.9	1131.9	1131.9	1131.9	1131.9	1131.9	1131.9	1131.9	1131.9
1°	1170.0	1175.5	1150.3	1153.0	1140.8	1119.0	1097.9	1099.9	1084.9
2°	1217.0	1231.3	1196.6	1175.5	1140.1	1102.0	1059.8	1054.3	1035.9
3°	1302.1	1295.3	1238.1	1195.2	1137.4	1080.2	1027.1	1014.8	999.2
4°	1370.8	1350.4	1280.3	1220.4	1136.0	1055.0	995.1	974.0	958.3
5°	1422.5	1396.7	1330.7	1239.4	1131.9	1040.7	961.7	937.9	920.9
6°	1464.1	1444.3	1363.3	1257.1	1126.5	1019.6	942.0	910.0	892.3
7°	1496.0	1479.7	1396.7	1281.0	1121.7	998.5	910.7	877.3	856.2
8°	1508.3	1500.8	1427.3	1298.0	1116.3	983.5	882.8	852.8	833.8
9°	1510.3	1511.0	1451.8	1314.3	1111.5	956.3	863.1	832.4	822.2
10°	1502.2	1508.3	1466.8	1332.7	1102.0	942.7	841.3	812.0	786.1
11°	1470.2	1497.4	1474.3	1344.9	1093.8	920.9	822.2	784.1	758.2
12°	1446.4	1472.2	1474.9	1360.6	1084.3	910.7	805.9	754.8	727.6
13°	1406.9	1434.1	1468.1	1364.7	1078.8	885.5	785.5	724.9	691.5
14°	1359.9	1403.5	1457.3	1373.5	1065.2	863.7	765.0	682.7	662.9
15°	1295.9	1357.9	1438.2	1376.9	1052.3	848.8	739.9	661.6	642.5
16°	1242.9	1313.0	1412.3	1376.9	1044.1	828.3	712.6	643.2	624.1
17°	1202.7	1259.9	1391.2	1377.6	1030.5	814.0	685.4	626.2	611.2
18°	1146.2	1210.2	1357.9	1374.9	1016.2	797.0	662.3	611.9	593.5
19°	1083.6	1159.8	1322.5	1370.1	1003.9	779.3	637.8	596.9	581.3
20°	1039.3	1109.4	1287.8	1362.6	991.0	767.8	624.8	579.9	565.6
21°	965.1	1050.9	1253.1	1352.4	977.4	748.0	607.1	564.9	549.3
22.5°	889.6	968.6	1189.1	1335.4	954.9	723.5	587.4	546.6	523.4
23°	860.3	948.8	1169.3	1330.7	947.5	717.4	581.3	538.4	518.0
24°	797.7	889.6	1128.5	1315.7	931.1	697.0	569.7	522.1	507.8
25°	714.7	839.2	1090.4	1300.0	917.5	682.0	558.1	509.1	490.7
26°	620.7	770.5	1055.7	1281.0	898.4	661.6	542.5	496.9	471.0
27°	562.9	711.3	1008.7	1260.5	884.8	646.6	529.5	478.5	460.1
28°	516.6	618.0	966.5	1240.8	868.5	628.2	520.7	465.6	443.8
29°	466.2	567.0	916.8	1214.3	850.8	607.1	506.4	452.6	429.5
30°	437.0	512.5	873.9	1194.5	829.7	592.8	489.4	439.7	416.6
32.5°	383.9	422.7	757.6	1138.0	789.5	552.0	461.5	404.3	384.6
35°	356.0	376.4	609.2	1072.0	743.9	518.0	429.5	375.0	357.3
37.5°	334.9	347.1	503.0	1001.2	697.7	488.0	400.2	347.8	330.8
40°	313.8	323.3	416.6	933.2	652.7	458.8	371.6	319.9	307.0
42.5°	294.7	302.2	361.4	865.8	606.5	428.8	343.7	298.1	286.5
45°	273.6	280.4	329.4	784.1	560.2	398.2	317.9	274.3	267.5
47.5°	255.9	260.7	298.8	711.3	514.6	368.9	291.3	255.2	250.5
50°	236.9	243.0	272.9	630.3	473.0	340.3	268.9	238.2	234.1
52.5°	218.5	221.2	251.2	549.3	429.5	312.4	245.0	221.2	218.5
55°	194.0	204.9	225.3	466.2	385.9	286.5	220.5	203.5	201.5
57.5°	166.1	180.4	202.2	391.4	345.1	258.0	200.8	187.2	178.3
60°	133.4	150.4	179.0	325.3	309.0	232.1	180.4	159.3	148.4
62.5°	117.1	122.5	157.9	272.3	272.3	207.6	160.0	136.8	132.0
65°	102.1	106.2	135.4	225.3	236.9	180.4	141.6	118.4	114.3



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	89.2	92.6	103.5	187.9	204.2	157.2	117.1	103.5	98.7
70°	76.2	79.0	88.5	153.1	174.2	134.1	98.7	88.5	85.1
72.5°	64.7	67.4	72.8	115.0	142.9	111.6	83.0	75.6	72.8
75°	53.8	55.1	60.6	85.8	115.0	89.2	66.7	61.9	60.6
77.5°	43.6	44.2	47.6	61.3	89.2	68.1	53.8	49.7	49.0
80°	33.4	34.0	36.8	44.2	65.3	49.0	40.2	38.1	36.8
82.5°	23.8	24.5	25.9	29.9	44.2	33.4	28.6	27.9	25.9
85°	15.0	15.0	16.3	18.4	25.2	19.1	17.7	17.0	16.3
87.5°	6.8	6.8	7.5	7.5	11.6	8.2	8.2	7.5	6.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)