

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: P735876

Luminaire Tested: S122DR-S485D930-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P735876  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2308-143-1)  
Test Lab: INNOVATION CENTER  
Issue Date: 1/24/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S122DR-S485D930-X4F0-XX-UDD-W-W  
Description: DEFINE 2 DIRECT RECESSED WITH WALL WASH OPTIC  
Light Source: 3000K CCT, 90 CRI LEDS  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1743.0 lumens  
Efficiency: N/A  
Efficacy: 88.9 lumens/watt  
Spacing Criteria (0/90/45): 0.9 / 1.11 / 1.12  
Luminous Opening: Rectangular (W 4' x L: 0.14' x H: 0')  
CIE Type: Direct

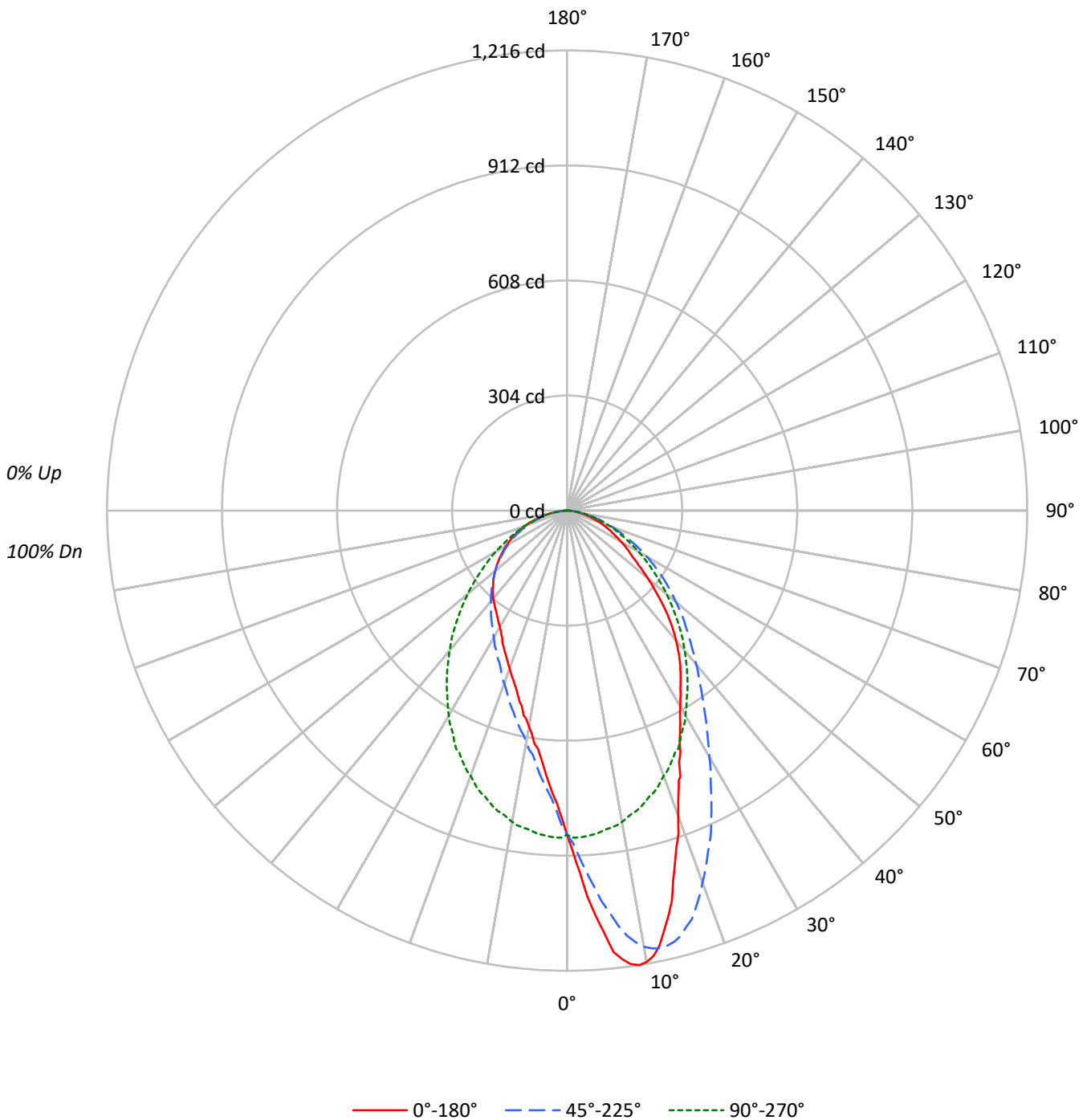
Input Watts (W): 19.6  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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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	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	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86				86
2	101	94	87	82	98	92	86	81	88	83	79	85	81	78	82	79	76	74				74
3	93	83	76	70	91	82	75	69	79	73	68	76	71	67	74	69	66	64				64
4	86	75	67	60	83	73	66	60	71	64	59	69	63	58	67	62	58	56				56
5	79	67	59	53	77	66	58	53	64	57	52	62	56	52	61	55	51	49				49
6	74	61	53	47	72	60	52	47	59	52	46	57	51	46	55	50	46	44				44
7	69	56	48	42	67	55	47	42	54	47	42	52	46	41	51	45	41	39				39
8	64	51	43	38	63	51	43	38	50	43	38	48	42	37	47	41	37	35				35
9	60	48	40	35	59	47	40	34	46	39	34	45	39	34	44	38	34	32				32
10	57	44	37	32	55	44	36	32	43	36	31	42	36	31	41	35	31	30				30

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

	0°	45°	90°	135°	180°
0°	16465	16465	16465	16465	16465
5°	21595	19958	16551	13883	13246
10°	23638	22844	16305	12134	11307
15°	21264	23139	15864	10955	10029
20°	17546	21400	15259	9935	9092
25°	14996	19092	14721	9190	8428
30°	13264	16673	13878	8612	7892
35°	12267	14769	13014	8206	7668
40°	11228	13326	12114	7859	7623
45°	9889	12164	11202	7617	7522
50°	8328	11214	10263	7413	7431
55°	7004	10318	9273	7161	7299
60°	6316	9326	8419	6947	7150
65°	5731	8196	7500	6613	7018
70°	5159	7081	6750	6120	6648
75°	4500	5993	5770	5555	6075
80°	3775	4693	4693	4826	5081
85°	2867	3374	3507	3771	3639

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 67.5°  
 Vertical Angle: 45°  
 Luminance: 17859 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	84.3	4.8
10°-20°	231.4	13.3
20°-30°	303.4	17.4
30°-40°	320.7	18.4
40°-50°	297.8	17.1
50°-60°	238.3	13.7
60°-70°	163.0	9.4
70°-80°	84.1	4.8
80°-90°	20.0	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°	619.1	35.5
0°-40°	939.8	53.9
0°-60°	1475.9	84.7
0°-90°	1743.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1743.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	857	857	857	857	857	
5°	1119	1034	858	720	686	110
15°	1069	1163	797	550	504	293
25°	707	900	694	433	397	326
35°	523	629	555	350	327	326
45°	364	448	412	280	277	279
55°	209	308	277	214	218	191
65°	126	180	165	145	154	125
75°	61	81	78	75	82	65
85°	13	15	16	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°	856.6	856.6	856.6	856.6	856.6	856.6	856.6	856.6	856.6
1°	903.7	899.0	878.4	879.6	864.3	847.2	831.3	821.3	813.1
2°	956.7	947.3	914.9	899.0	864.3	827.8	794.8	786.0	774.8
3°	1020.9	998.5	953.8	916.1	863.1	810.1	764.8	748.9	747.1
4°	1072.7	1052.7	993.2	933.8	860.2	793.1	741.8	724.8	716.5
5°	1119.2	1106.3	1034.4	956.1	857.8	776.6	719.5	695.9	686.5
6°	1172.8	1146.3	1067.4	978.5	853.7	760.7	699.4	671.2	658.2
7°	1194.6	1178.1	1104.5	993.2	848.4	742.4	674.1	643.5	634.1
8°	1209.9	1203.4	1133.9	1017.4	846.0	725.3	651.7	632.9	621.7
9°	1216.4	1211.1	1155.1	1027.4	841.9	716.5	640.6	609.4	597.0
10°	1211.1	1213.4	1170.4	1042.7	835.4	698.3	621.7	594.6	579.3
11°	1198.7	1204.6	1178.7	1060.3	827.2	683.5	604.6	577.0	562.3
12°	1175.2	1188.1	1182.2	1072.7	819.5	670.6	592.9	566.4	553.4
13°	1138.6	1167.5	1179.9	1078.0	814.8	655.9	578.2	547.5	531.1
14°	1105.7	1135.7	1173.4	1089.8	806.6	639.4	564.6	534.0	519.9
15°	1068.6	1103.3	1162.8	1093.3	797.2	625.8	550.5	516.9	504.0
16°	1016.8	1063.3	1143.4	1097.4	786.0	610.5	537.5	505.7	488.7
17°	973.8	1023.8	1128.6	1099.8	780.1	598.8	526.3	488.7	477.5
18°	934.4	990.9	1102.1	1098.0	770.7	585.2	509.9	476.3	465.7
19°	903.1	949.1	1075.7	1093.9	757.7	572.3	497.5	467.5	455.1
20°	857.8	910.8	1046.2	1092.1	746.0	560.5	485.7	455.1	444.5
21°	820.1	874.3	1019.1	1086.2	737.7	549.3	476.9	443.3	433.9
22.5°	770.7	818.4	973.8	1075.1	719.5	530.5	457.5	432.1	419.2
23°	764.8	805.4	962.0	1071.5	714.2	526.3	451.0	425.7	415.1
24°	727.7	770.7	934.4	1060.3	700.6	513.4	440.4	418.0	405.7
25°	707.1	742.4	900.2	1049.7	694.1	501.6	433.3	408.0	397.4
26°	678.2	718.9	869.6	1034.4	680.0	491.0	422.1	399.2	389.2
27°	657.0	691.2	837.8	1023.3	663.5	479.8	413.3	390.3	378.0
28°	636.4	669.4	807.2	1005.0	651.7	467.5	406.8	382.7	370.9
29°	615.2	644.1	782.5	990.9	640.6	456.9	396.8	372.7	361.5
30°	597.6	624.1	751.2	972.0	625.3	444.5	388.0	365.6	355.6
32.5°	557.0	579.3	687.7	927.3	588.8	419.8	366.8	346.2	340.3
35°	522.8	537.5	629.4	877.2	554.6	393.3	349.7	329.7	326.8
37.5°	486.9	501.0	576.4	824.8	518.7	369.1	330.3	317.3	315.0
40°	447.5	466.3	531.1	773.0	482.8	345.6	313.2	303.2	303.8
42.5°	408.0	429.8	486.9	712.4	449.2	323.2	296.7	289.7	290.8
45°	363.8	391.5	447.5	657.0	412.1	302.0	280.2	276.7	276.7
47.5°	317.9	353.3	413.3	599.9	376.8	280.8	264.4	262.0	263.2
50°	278.5	310.3	375.0	544.6	343.2	261.4	247.9	247.3	248.5
52.5°	239.6	271.4	341.5	492.8	309.1	243.7	232.0	232.0	233.1
55°	209.0	233.7	307.9	438.6	276.7	223.1	213.7	215.5	217.8
57.5°	187.8	204.3	274.9	386.8	246.7	203.1	197.2	198.4	201.4
60°	164.3	177.2	242.6	339.1	219.0	183.7	180.7	183.1	186.0
62.5°	143.1	154.3	212.0	296.1	189.0	164.9	163.7	167.2	170.1
65°	126.0	133.6	180.2	252.6	164.9	146.0	145.4	150.7	154.3



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	108.3	114.2	152.5	211.4	140.7	127.2	127.2	133.1	136.0
70°	91.8	96.6	126.0	174.3	120.1	108.3	108.9	116.0	118.3
72.5°	74.8	78.9	102.4	140.1	97.1	90.7	92.4	98.3	100.7
75°	60.6	63.6	80.7	110.7	77.7	72.4	74.8	80.1	81.8
77.5°	46.5	48.9	59.5	81.2	59.5	56.5	58.9	63.6	63.6
80°	34.1	34.7	42.4	57.1	42.4	40.6	43.6	45.9	45.9
82.5°	22.4	23.6	27.7	36.5	28.3	27.7	28.8	30.6	30.6
85°	13.0	13.5	15.3	20.0	15.9	15.9	17.1	17.1	16.5
87.5°	5.3	5.9	6.5	7.7	7.1	7.7	7.7	6.5	7.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)