

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2024 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: S122RDRP-S485D830-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

Test Information

Test Method: LM-79-2024
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: S122RDRP-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

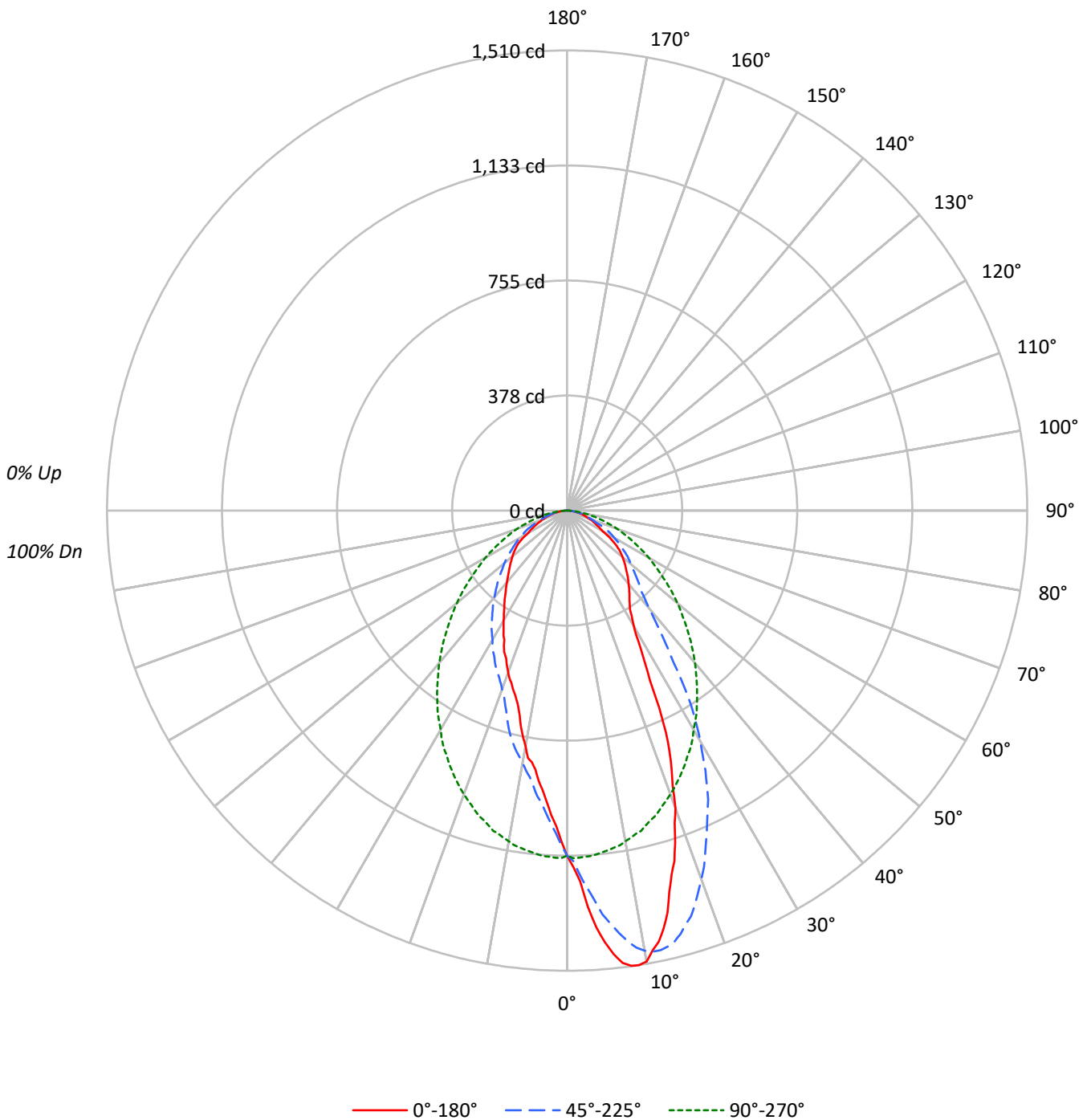
Lumens per Lamp: N/A
Luminaire Lumens: 1939.5 lumens
Efficiency: N/A
Efficacy: 99.0 lumens/watt
Spacing Criteria (0/90/45): 0.82 / 1.11 / 1
Luminous Opening: Rectangular (W 4' x L: 0.14' x H: 0')
CIE Type: Direct

Input Watts (W): 19.6
Input Voltage (V): 120
Input Current (A_{in}): 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	103	99	108	104	101	98	100	97	95	96	94	92	92	91	89	87				87
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	75				75
3	94	85	78	72	92	83	77	71	80	75	70	78	73	69	75	71	68	66				66
4	87	77	69	63	85	75	68	62	73	67	62	71	65	61	69	64	60	58				58
5	81	69	61	55	79	68	61	55	66	60	55	64	59	54	63	58	54	52				52
6	75	63	55	50	74	63	55	49	61	54	49	59	53	49	58	52	48	46				46
7	71	58	50	45	69	57	50	45	56	49	44	55	49	44	53	48	44	42				42
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38				38
9	62	50	42	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35				35
10	59	46	39	34	57	46	39	34	45	39	34	44	38	34	43	38	34	32				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

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CIE UGR TABLE:

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	17.14	18.61	17.50	18.92	19.23	19.83	21.30	20.20	21.61	21.93
	3H	18.25	19.57	18.63	19.90	20.26	21.27	22.59	21.65	22.91	23.28
	4H	18.70	19.93	19.10	20.28	20.66	21.77	23.00	22.17	23.35	23.73
	6H	19.04	20.18	19.45	20.54	20.94	22.10	23.24	22.51	23.60	24.00
	8H	19.15	20.23	19.58	20.62	21.03	22.19	23.27	22.62	23.66	24.06
	12H	19.23	20.26	19.66	20.64	21.07	22.24	23.27	22.67	23.65	24.08
4H	2H	18.31	19.54	18.71	19.89	20.27	20.28	21.52	20.68	21.86	22.24
	3H	19.53	20.55	19.94	20.95	21.35	21.94	22.96	22.35	23.36	23.76
	4H	20.01	20.93	20.45	21.35	21.79	22.58	23.50	23.01	23.91	24.35
	6H	20.41	21.21	20.87	21.65	22.11	23.03	23.83	23.49	24.27	24.74
	8H	20.55	21.29	21.01	21.74	22.21	23.16	23.91	23.63	24.35	24.82
	12H	20.65	21.31	21.13	21.79	22.26	23.24	23.91	23.73	24.39	24.86
8H	4H	20.41	21.16	20.88	21.60	22.07	22.69	23.44	23.16	23.88	24.35
	6H	20.91	21.52	21.40	22.01	22.49	23.25	23.87	23.75	24.36	24.84
	8H	21.09	21.64	21.61	22.16	22.64	23.45	24.00	23.97	24.51	25.00
	12H	21.25	21.74	21.76	22.23	22.80	23.60	24.09	24.11	24.58	25.15
12H	4H	20.46	21.12	20.94	21.60	22.08	22.68	23.34	23.17	23.82	24.30
	6H	20.97	21.53	21.49	22.04	22.53	23.25	23.80	23.77	24.31	24.80
	8H	21.22	21.70	21.73	22.19	22.76	23.50	23.98	24.01	24.48	25.04