

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: P735941

Luminaire Tested: S122RDRP-S865D940-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

Test Information

Test Method: LM-79-2024
Report Number: P735941
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-S865D940-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

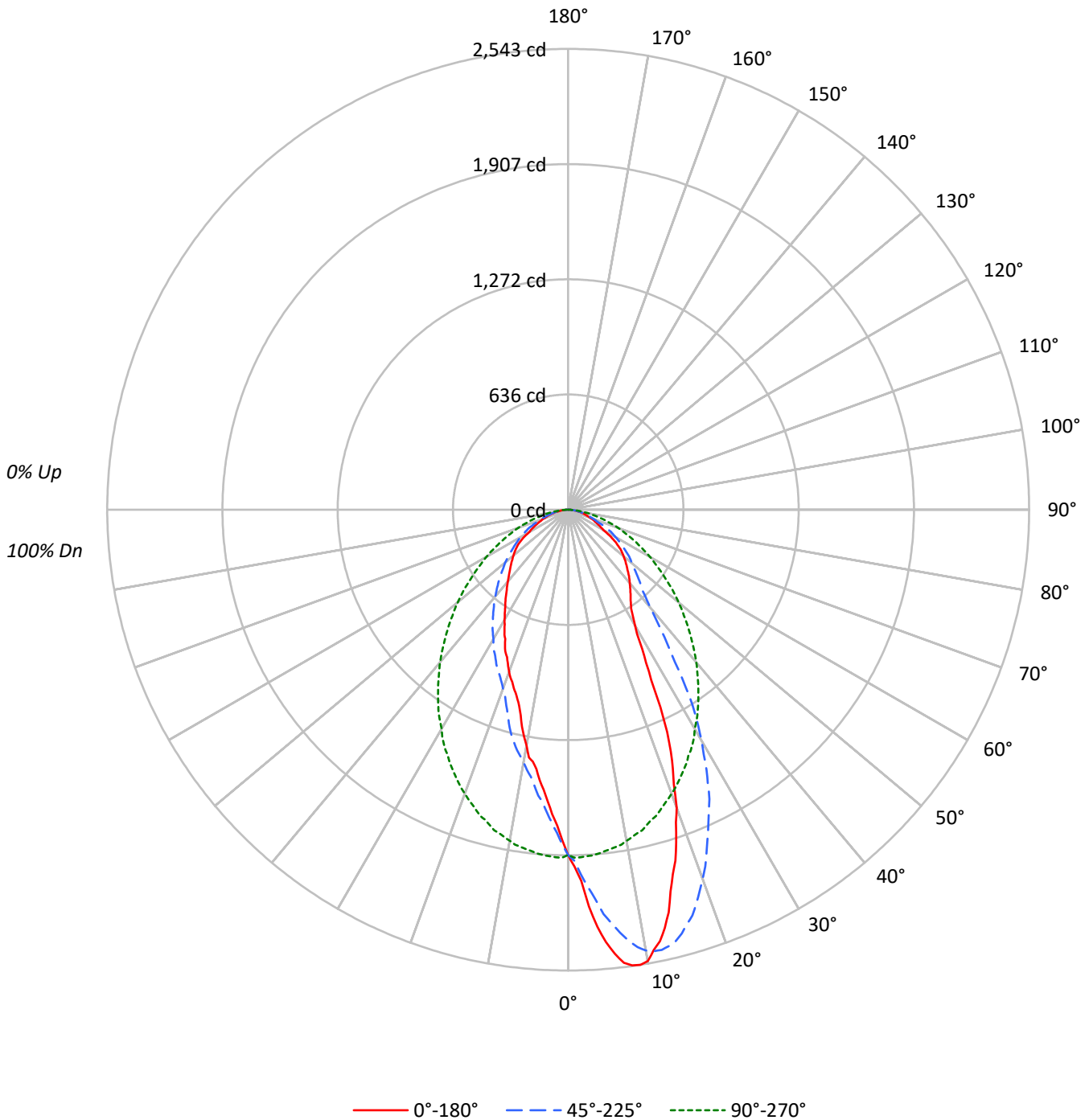
Lumens per Lamp: N/A
Luminaire Lumens: 3265.2 lumens
Efficiency: N/A
Efficacy: 93.3 lumens/watt
Spacing Criteria (0/90/45): 0.82 / 1.11 / 1
Luminous Opening: Rectangular (W 4' x L: 0.14' x H: 0')
CIE Type: Direct

Input Watts (W): 35
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

TEST NUMBER: P735941

CATALOG NUMBER: S122RDRP-S865D940-X4F0-XX-UDD-W-W

Luminous Intensity Polar Plot



TEST NUMBER: P735941

CATALOG NUMBER: S122RDRP-S865D940-X4F0-XX-UDD-W-W

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°	36628	36628	36628	36628	36628
5°	46209	43224	36768	31242	29915
10°	49361	48197	36209	27643	25832
15°	43416	48182	35254	24787	21525
20°	35792	44346	34127	21516	19477
25°	25518	38932	32761	19927	17522
30°	16329	32655	31004	18286	15565
35°	14062	24066	29390	16967	14116
40°	13256	17597	27573	15700	12967
45°	12523	15076	25636	14546	12241
50°	11925	13740	23815	13534	11788
55°	10945	12711	21772	12443	11367
60°	8634	11587	19998	11675	9603
65°	7818	10370	18138	10838	8755
70°	7210	8374	16489	9340	8048
75°	6721	7575	14385	8340	7575
80°	6210	6852	12176	7483	6852
85°	5558	6065	9351	6572	6065

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 35884 cd/sqm



TEST NUMBER: P735941

CATALOG NUMBER: S122RDRP-S865D940-X4F0-XX-UDD-W-W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	184.8	5.7
10°-20°	496.6	15.2
20°-30°	622.9	19.1
30°-40°	593.5	18.2
40°-50°	523.6	16.0
50°-60°	411.9	12.6
60°-70°	262.8	8.0
70°-80°	133.6	4.1
80°-90°	35.4	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°	1304.3	39.9
0°-40°	1897.9	58.1
0°-60°	2833.4	86.8
0°-90°	3265.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3265.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1906	1906	1906	1906	1906	
5°	2395	2240	1906	1619	1550	233
15°	2182	2421	1772	1246	1082	604
25°	1203	1836	1545	940	826	542
35°	599	1026	1252	723	602	381
45°	461	555	943	535	450	357
55°	327	379	650	371	339	287
65°	172	228	399	238	192	172
75°	90	102	194	112	102	96
85°	25	28	42	30	28	29
90°	0	0	0	0	0	



TEST NUMBER: P735941

CATALOG NUMBER: S122RDRP-S865D940-X4F0-XX-UDD-W-W

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	1905.6	1905.6	1905.6	1905.6	1905.6	1905.6	1905.6	1905.6	1905.6
1°	1969.8	1979.0	1936.6	1941.2	1920.5	1883.9	1848.3	1851.8	1826.6
2°	2048.9	2072.9	2014.5	1979.0	1919.4	1855.2	1784.2	1775.0	1744.1
3°	2192.1	2180.6	2084.4	2012.2	1914.8	1818.5	1729.2	1708.5	1682.2
4°	2307.8	2273.5	2155.4	2054.6	1912.5	1776.1	1675.3	1639.8	1613.4
5°	2394.9	2351.4	2240.2	2086.7	1905.6	1752.1	1619.2	1579.0	1550.4
6°	2464.8	2431.6	2295.2	2116.5	1896.5	1716.6	1585.9	1532.1	1502.3
7°	2518.7	2491.2	2351.4	2156.6	1888.4	1681.0	1533.2	1477.1	1441.5
8°	2539.3	2526.7	2403.0	2185.2	1879.3	1655.8	1486.2	1435.8	1403.7
9°	2542.8	2543.9	2444.2	2212.7	1871.3	1610.0	1453.0	1401.4	1384.2
10°	2529.0	2539.3	2469.4	2243.7	1855.2	1587.1	1416.3	1367.1	1323.5
11°	2475.1	2521.0	2482.0	2264.3	1841.5	1550.4	1384.2	1320.1	1276.5
12°	2435.0	2478.6	2483.2	2290.7	1825.4	1533.2	1356.7	1270.8	1225.0
13°	2368.6	2414.4	2471.7	2297.5	1816.3	1490.8	1322.4	1220.4	1164.2
14°	2289.5	2362.8	2453.4	2312.4	1793.3	1454.1	1288.0	1149.3	1116.1
15°	2181.8	2286.1	2421.3	2318.2	1771.6	1428.9	1245.6	1113.8	1081.7
16°	2092.4	2210.4	2377.7	2318.2	1757.8	1394.6	1199.8	1082.9	1050.8
17°	2024.8	2121.1	2342.2	2319.3	1734.9	1370.5	1153.9	1054.2	1029.0
18°	1929.7	2037.4	2286.1	2314.7	1710.8	1341.8	1115.0	1030.2	999.2
19°	1824.3	1952.6	2226.5	2306.7	1690.2	1312.1	1073.7	1005.0	978.6
20°	1749.8	1867.8	2168.0	2294.1	1668.4	1292.6	1051.9	976.3	952.2
21°	1624.9	1769.3	2109.6	2276.9	1645.5	1259.3	1022.1	951.1	924.7
22.5°	1497.7	1630.6	2001.9	2248.3	1607.7	1218.1	988.9	920.2	881.2
23°	1448.4	1597.4	1968.7	2240.2	1595.1	1207.8	978.6	906.4	872.0
24°	1343.0	1497.7	1899.9	2215.0	1567.6	1173.4	959.1	878.9	854.8
25°	1203.2	1412.9	1835.7	2188.7	1544.7	1148.2	939.6	857.1	826.2
26°	1045.1	1297.2	1777.3	2156.6	1512.6	1113.8	913.3	836.5	793.0
27°	947.7	1197.5	1698.2	2122.2	1489.7	1088.6	891.5	805.6	774.6
28°	869.7	1040.5	1627.2	2089.0	1462.2	1057.7	876.6	783.8	747.1
29°	784.9	954.5	1543.5	2044.3	1432.4	1022.1	852.5	762.0	723.1
30°	735.7	862.9	1471.3	2011.1	1396.9	998.1	823.9	740.3	701.3
32.5°	646.3	711.6	1275.4	1915.9	1329.2	929.3	776.9	680.7	647.4
35°	599.3	633.7	1025.6	1804.8	1252.5	872.0	723.1	631.4	601.6
37.5°	563.8	584.4	846.8	1685.6	1174.5	821.6	673.8	585.6	556.9
40°	528.3	544.3	701.3	1571.0	1098.9	772.3	625.7	538.6	516.8
42.5°	496.2	508.8	608.5	1457.6	1021.0	721.9	578.7	501.9	482.4
45°	460.7	472.1	554.6	1320.1	943.1	670.4	535.1	461.8	450.3
47.5°	430.9	438.9	503.0	1197.5	866.3	621.1	490.4	429.7	421.7
50°	398.8	409.1	459.5	1061.1	796.4	572.9	452.6	401.1	394.2
52.5°	367.8	372.4	422.8	924.7	723.1	526.0	412.5	372.4	367.8
55°	326.6	344.9	379.3	784.9	649.7	482.4	371.3	342.6	339.2
57.5°	279.6	303.7	340.3	658.9	581.0	434.3	338.0	315.1	300.2
60°	224.6	253.2	301.4	547.7	520.2	390.8	303.7	268.1	249.8
62.5°	197.1	206.3	265.8	458.4	458.4	349.5	269.3	230.3	222.3
65°	171.9	178.8	228.0	379.3	398.8	303.7	238.3	199.4	192.5



TEST NUMBER: P735941

CATALOG NUMBER: S122RDRP-S865D940-X4F0-XX-UDD-W-W

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	150.1	155.8	174.2	316.3	343.8	264.7	197.1	174.2	166.2
70°	128.3	132.9	149.0	257.8	293.4	225.7	166.2	149.0	143.2
72.5°	108.9	113.4	122.6	193.7	240.6	187.9	139.8	127.2	122.6
75°	90.5	92.8	102.0	144.4	193.7	150.1	112.3	104.3	102.0
77.5°	73.3	74.5	80.2	103.1	150.1	114.6	90.5	83.7	82.5
80°	56.1	57.3	61.9	74.5	110.0	82.5	67.6	64.2	61.9
82.5°	40.1	41.3	43.5	50.4	74.5	56.1	48.1	47.0	43.5
85°	25.2	25.2	27.5	30.9	42.4	32.1	29.8	28.6	27.5
87.5°	11.5	11.5	12.6	12.6	19.5	13.8	13.8	12.6	11.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P735941
 CATALOG NUMBER: S122RDRP-S865D940-X4F0-XX-UDD-W-W

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	18.95	20.41	19.31	20.73	21.04	21.64	23.11	22.01	23.42	23.74
	3H	20.06	21.38	20.44	21.70	22.07	23.08	24.40	23.46	24.72	25.09
	4H	20.50	21.74	20.91	22.09	22.46	23.58	24.81	23.98	25.16	25.54
	6H	20.85	21.98	21.26	22.35	22.74	23.91	25.05	24.32	25.41	25.81
	8H	20.96	22.04	21.39	22.43	22.83	24.00	25.08	24.43	25.47	25.87
	12H	21.04	22.07	21.47	22.45	22.88	24.05	25.08	24.48	25.46	25.89
4H	2H	20.12	21.35	20.52	21.70	22.08	22.09	23.32	22.49	23.67	24.05
	3H	21.34	22.36	21.75	22.76	23.16	23.75	24.77	24.16	25.17	25.57
	4H	21.82	22.74	22.25	23.15	23.59	24.39	25.31	24.82	25.72	26.16
	6H	22.22	23.02	22.68	23.46	23.92	24.84	25.64	25.30	26.08	26.55
	8H	22.36	23.10	22.82	23.55	24.01	24.97	25.72	25.44	26.16	26.63
	12H	22.46	23.12	22.94	23.60	24.07	25.05	25.72	25.54	26.20	26.67
8H	4H	22.22	22.97	22.69	23.41	23.88	24.50	25.25	24.97	25.69	26.16
	6H	22.71	23.33	23.21	23.82	24.30	25.06	25.68	25.56	26.17	26.65
	8H	22.90	23.45	23.42	23.96	24.45	25.26	25.81	25.78	26.32	26.81
	12H	23.06	23.55	23.57	24.04	24.61	25.41	25.90	25.92	26.39	26.96
12H	4H	22.27	22.93	22.75	23.41	23.88	24.49	25.15	24.98	25.63	26.11
	6H	22.78	23.33	23.30	23.85	24.33	25.06	25.61	25.58	26.12	26.61
	8H	23.03	23.51	23.54	24.00	24.57	25.31	25.79	25.82	26.29	26.85