

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: P735938

Luminaire Tested: S122RDRP-S865D927-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

Test Information

Test Method: LM-79-2024
Report Number: P735938
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-S865D927-X4F0-XX-UDD-W-W
Description: DEFINE 2 REGRESSED DIRECT RECESSED WITH WALL WASH OPTIC
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

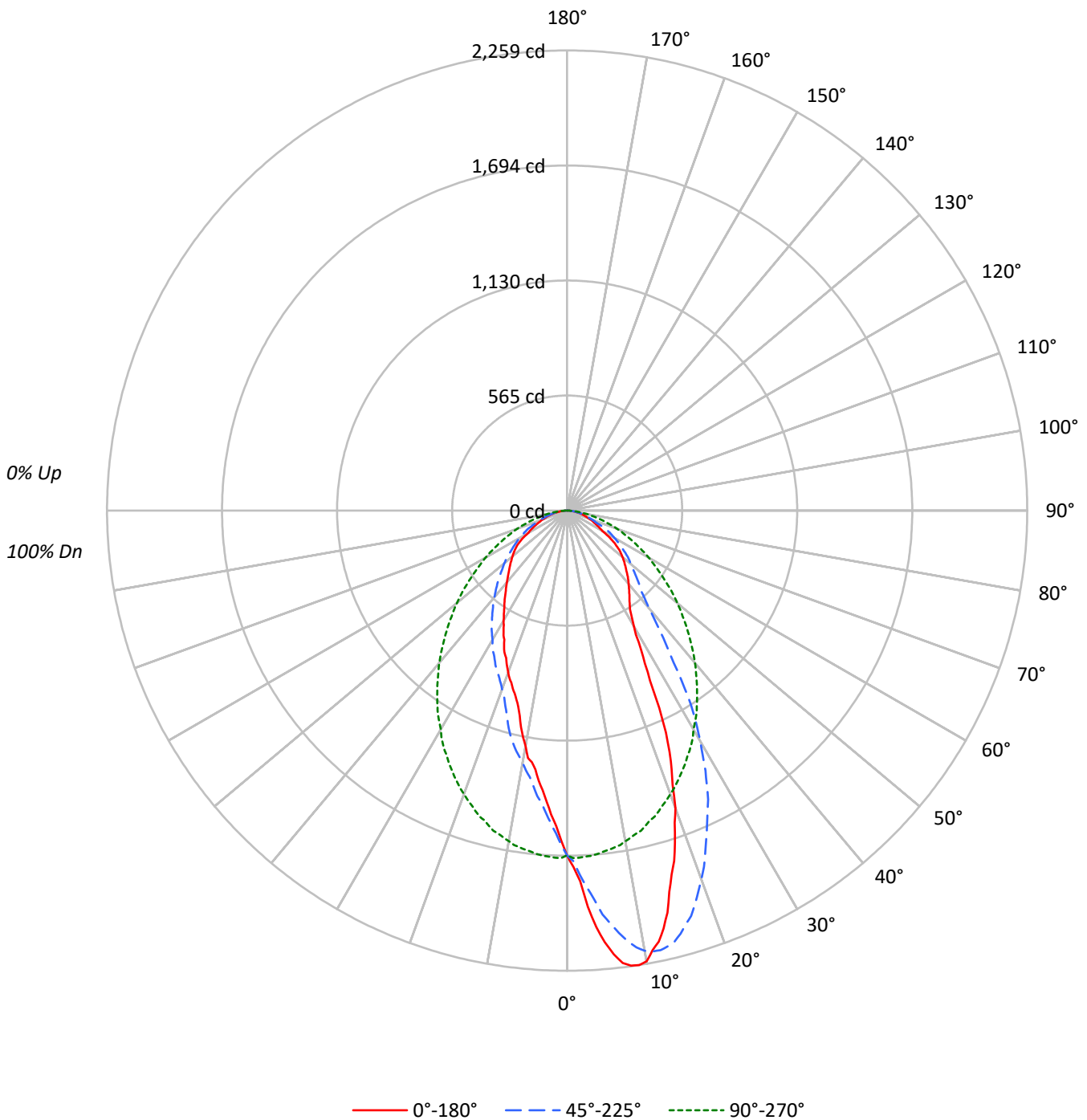
Lumens per Lamp: N/A
Luminaire Lumens: 2900.7 lumens
Efficiency: N/A
Efficacy: 82.9 lumens/watt
Spacing Criteria (0/90/45): 0.82 / 1.11 / 1
Luminous Opening: Rectangular (W 4' x L: 0.14' x H: 0')
CIE Type: Direct

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

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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°	32540	32540	32540	32540	32540
5°	41051	38400	32664	27753	26577
10°	43851	42818	32167	24557	22949
15°	38571	42803	31318	22021	19123
20°	31797	39398	30318	19115	17305
25°	22670	34587	29104	17705	15567
30°	14507	29011	27542	16244	13827
35°	12493	21379	26109	15074	12540
40°	11775	15632	24497	13946	11520
45°	11123	13393	22774	12923	10876
50°	10595	12206	21156	12024	10472
55°	9722	11293	19343	11052	10097
60°	7669	10291	17768	10372	8530
65°	6945	9215	16114	9628	7777
70°	6407	7435	14646	8295	7149
75°	5971	6728	12774	7412	6728
80°	5523	6088	10815	6653	6088
85°	4940	5381	8314	5844	5381

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 31877 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	164.2	5.7
10°-20°	441.2	15.2
20°-30°	553.4	19.1
30°-40°	527.3	18.2
40°-50°	465.2	16.0
50°-60°	365.9	12.6
60°-70°	233.5	8.0
70°-80°	118.7	4.1
80°-90°	31.5	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°	1158.8	39.9
0°-40°	1686.0	58.1
0°-60°	2517.1	86.8
0°-90°	2900.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2900.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1693	1693	1693	1693	1693	
5°	2128	1990	1693	1438	1377	207
15°	1938	2151	1574	1107	961	537
25°	1069	1631	1372	835	734	482
35°	532	911	1113	642	534	339
45°	409	493	838	475	400	317
55°	290	337	577	330	301	255
65°	153	203	354	212	171	153
75°	80	91	172	100	91	86
85°	22	24	38	26	24	25
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°	1692.9	1692.9	1692.9	1692.9	1692.9	1692.9	1692.9	1692.9	1692.9
1°	1749.9	1758.1	1720.4	1724.5	1706.2	1673.6	1642.0	1645.1	1622.7
2°	1820.2	1841.6	1789.6	1758.1	1705.1	1648.1	1585.0	1576.9	1549.4
3°	1947.4	1937.3	1851.7	1787.6	1701.1	1615.6	1536.2	1517.8	1494.4
4°	2050.2	2019.7	1914.9	1825.3	1699.0	1577.9	1488.3	1456.8	1433.3
5°	2127.6	2088.9	1990.2	1853.8	1692.9	1556.5	1438.4	1402.8	1377.4
6°	2189.7	2160.2	2039.1	1880.2	1684.8	1525.0	1408.9	1361.1	1334.6
7°	2237.6	2213.1	2088.9	1915.9	1677.7	1493.4	1362.1	1312.2	1280.6
8°	2255.9	2244.7	2134.7	1941.3	1669.5	1471.0	1320.3	1275.6	1247.0
9°	2258.9	2260.0	2171.4	1965.8	1662.4	1430.3	1290.8	1245.0	1229.7
10°	2246.7	2255.9	2193.8	1993.2	1648.1	1409.9	1258.2	1214.5	1175.8
11°	2198.9	2239.6	2205.0	2011.6	1635.9	1377.4	1229.7	1172.7	1134.1
12°	2163.2	2201.9	2206.0	2035.0	1621.7	1362.1	1205.3	1129.0	1088.2
13°	2104.2	2144.9	2195.8	2041.1	1613.5	1324.4	1174.8	1084.2	1034.3
14°	2034.0	2099.1	2179.5	2054.3	1593.2	1291.8	1144.2	1021.1	991.5
15°	1938.3	2030.9	2151.0	2059.4	1573.8	1269.4	1106.6	989.5	961.0
16°	1858.9	1963.7	2112.3	2059.4	1561.6	1238.9	1065.8	962.0	933.5
17°	1798.8	1884.3	2080.8	2060.4	1541.2	1217.5	1025.1	936.6	914.2
18°	1714.3	1810.0	2030.9	2056.4	1519.9	1192.1	990.5	915.2	887.7
19°	1620.7	1734.7	1978.0	2049.2	1501.5	1165.6	953.9	892.8	869.4
20°	1554.5	1659.3	1926.1	2038.0	1482.2	1148.3	934.5	867.3	846.0
21°	1443.5	1571.8	1874.1	2022.8	1461.8	1118.8	908.1	844.9	821.5
22.5°	1330.5	1448.6	1778.4	1997.3	1428.3	1082.1	878.5	817.5	782.8
23°	1286.8	1419.1	1748.9	1990.2	1417.1	1073.0	869.4	805.2	774.7
24°	1193.1	1330.5	1687.8	1967.8	1392.6	1042.4	852.1	780.8	759.4
25°	1068.9	1255.2	1630.8	1944.4	1372.3	1020.0	834.8	761.5	734.0
26°	928.4	1152.4	1578.9	1915.9	1343.8	989.5	811.3	743.1	704.5
27°	841.9	1063.8	1508.7	1885.3	1323.4	967.1	792.0	715.7	688.2
28°	772.7	924.3	1445.6	1855.8	1299.0	939.6	778.8	696.3	663.7
29°	697.3	848.0	1371.2	1816.1	1272.5	908.1	757.4	677.0	642.4
30°	653.6	766.6	1307.1	1786.6	1240.9	886.7	731.9	657.6	623.0
32.5°	574.2	632.2	1133.0	1702.1	1180.9	825.6	690.2	604.7	575.2
35°	532.4	563.0	911.1	1603.3	1112.7	774.7	642.4	560.9	534.4
37.5°	500.9	519.2	752.3	1497.5	1043.4	729.9	598.6	520.2	494.7
40°	469.3	483.5	623.0	1395.7	976.3	686.1	555.8	478.5	459.1
42.5°	440.8	452.0	540.6	1294.9	907.0	641.3	514.1	445.9	428.6
45°	409.2	419.4	492.7	1172.7	837.8	595.5	475.4	410.3	400.1
47.5°	382.8	389.9	446.9	1063.8	769.6	551.8	435.7	381.7	374.6
50°	354.3	363.4	408.2	942.7	707.5	509.0	402.1	356.3	350.2
52.5°	326.8	330.8	375.6	821.5	642.4	467.3	366.5	330.8	326.8
55°	290.1	306.4	337.0	697.3	577.2	428.6	329.8	304.4	301.3
57.5°	248.4	269.8	302.3	585.3	516.1	385.8	300.3	279.9	266.7
60°	199.5	225.0	267.7	486.6	462.2	347.1	269.8	238.2	221.9
62.5°	175.1	183.2	236.2	407.2	407.2	310.5	239.2	204.6	197.5
65°	152.7	158.8	202.6	337.0	354.3	269.8	211.7	177.1	171.0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	133.4	138.4	154.7	281.0	305.4	235.2	175.1	154.7	147.6
70°	114.0	118.1	132.3	229.0	260.6	200.5	147.6	132.3	127.2
72.5°	96.7	100.8	108.9	172.0	213.8	167.0	124.2	113.0	108.9
75°	80.4	82.5	90.6	128.3	172.0	133.4	99.8	92.6	90.6
77.5°	65.2	66.2	71.3	91.6	133.4	101.8	80.4	74.3	73.3
80°	49.9	50.9	55.0	66.2	97.7	73.3	60.1	57.0	55.0
82.5°	35.6	36.6	38.7	44.8	66.2	49.9	42.8	41.7	38.7
85°	22.4	22.4	24.4	27.5	37.7	28.5	26.5	25.4	24.4
87.5°	10.2	10.2	11.2	11.2	17.3	12.2	12.2	11.2	10.2
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	18.54	20.00	18.90	20.32	20.63	21.23	22.70	21.60	23.01	23.33
	3H	19.65	20.96	20.03	21.29	21.66	22.67	23.98	23.05	24.31	24.68
	4H	20.09	21.32	20.49	21.67	22.05	23.17	24.40	23.57	24.75	25.13
	6H	20.44	21.57	20.85	21.94	22.33	23.50	24.64	23.91	25.00	25.40
	8H	20.55	21.63	20.98	22.02	22.42	23.59	24.67	24.02	25.06	25.46
	12H	20.63	21.66	21.06	22.04	22.47	23.64	24.67	24.07	25.05	25.48
4H	2H	19.70	20.94	20.10	21.28	21.66	21.68	22.91	22.08	23.26	23.64
	3H	20.93	21.95	21.34	22.35	22.75	23.34	24.36	23.75	24.76	25.16
	4H	21.41	22.33	21.84	22.74	23.18	23.98	24.90	24.41	25.31	25.75
	6H	21.81	22.61	22.27	23.05	23.51	24.43	25.23	24.89	25.67	26.13
	8H	21.95	22.69	22.41	23.14	23.60	24.56	25.31	25.03	25.75	26.22
	12H	22.05	22.71	22.53	23.19	23.66	24.64	25.30	25.13	25.78	26.26
8H	4H	21.81	22.56	22.28	23.00	23.47	24.09	24.83	24.56	25.28	25.75
	6H	22.30	22.92	22.80	23.41	23.89	24.65	25.27	25.15	25.76	26.24
	8H	22.49	23.04	23.01	23.55	24.04	24.85	25.40	25.37	25.91	26.40
	12H	22.65	23.14	23.16	23.63	24.20	25.00	25.49	25.51	25.98	26.55
12H	4H	21.86	22.52	22.34	23.00	23.47	24.08	24.74	24.56	25.22	25.69
	6H	22.37	22.92	22.89	23.43	23.92	24.65	25.20	25.17	25.71	26.20
	8H	22.62	23.10	23.13	23.59	24.16	24.90	25.38	25.41	25.87	26.44