

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: P735942

Luminaire Tested: S122RDR-S865D950-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

Test Information

Test Method: LM-79-2019
Report Number: P735942
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-S865D950-X4F0-XX-UDD-W-W
Description: DEFINE 2 REGRESSED DIRECT RECESSED WITH WALL WASH OPTIC
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3493.3 lumens
Efficiency: N/A
Efficacy: 99.8 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

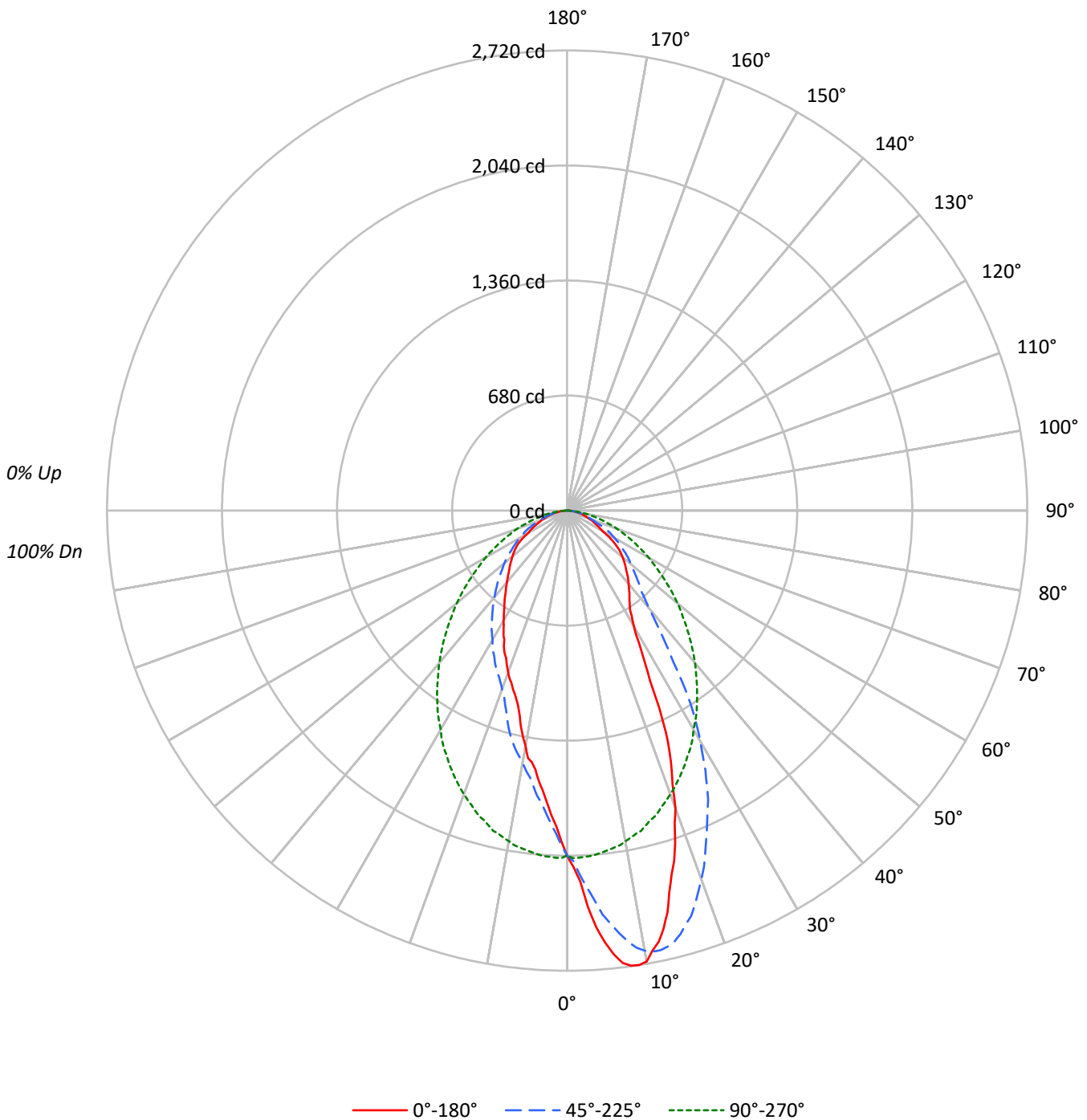
Input Watts (W): 35
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	39186	39186	39186	39186	39186
5°	49437	46244	39336	33424	32004
10°	52809	51564	38739	29575	27637
15°	46449	51547	37715	26518	23029
20°	38291	47445	36512	23020	20839
25°	27299	41653	35049	21321	18746
30°	17470	34937	33168	19565	16653
35°	15046	25746	31443	18152	15102
40°	14182	18826	29500	16796	13873
45°	13396	16130	27428	15562	13097
50°	12757	14700	25477	14479	12610
55°	11709	13599	23294	13311	12161
60°	9238	12394	21397	12490	10276
65°	8364	11097	19402	11598	9369
70°	7716	8958	17635	9992	8610
75°	7189	8102	15388	8919	8102
80°	6653	7328	13028	8003	7328
85°	5955	6484	10012	7035	6484

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 38391 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	197.7	5.7
10°-20°	531.3	15.2
20°-30°	666.4	19.1
30°-40°	635.0	18.2
40°-50°	560.2	16.0
50°-60°	440.6	12.6
60°-70°	281.2	8.0
70°-80°	142.9	4.1
80°-90°	37.9	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°	1395.5	39.9
0°-40°	2030.4	58.1
0°-60°	3031.3	86.8
0°-90°	3493.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3493.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2039	2039	2039	2039	2039	
5°	2562	2397	2039	1732	1659	249
15°	2334	2590	1895	1333	1157	647
25°	1287	1964	1653	1005	884	580
35°	641	1097	1340	774	644	408
45°	493	593	1009	572	482	382
55°	349	406	695	397	363	307
65°	184	244	427	255	206	184
75°	97	109	207	120	109	103
85°	27	29	45	32	29	31
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°	2038.7	2038.7	2038.7	2038.7	2038.7	2038.7	2038.7	2038.7	2038.7
1°	2107.4	2117.2	2071.8	2076.8	2054.7	2015.5	1977.4	1981.1	1954.2
2°	2192.0	2217.7	2155.2	2117.2	2053.5	1984.8	1908.8	1899.0	1865.9
3°	2345.2	2333.0	2230.0	2152.8	2048.6	1945.6	1850.0	1827.9	1799.7
4°	2469.1	2432.3	2306.0	2198.1	2046.1	1900.2	1792.3	1754.3	1726.1
5°	2562.2	2515.6	2396.7	2232.4	2038.7	1874.5	1732.3	1689.4	1658.7
6°	2637.0	2601.5	2455.6	2264.3	2028.9	1836.5	1696.7	1639.1	1607.2
7°	2694.6	2665.2	2515.6	2307.2	2020.4	1798.5	1640.3	1580.2	1542.2
8°	2716.7	2703.2	2570.8	2337.9	2010.5	1771.5	1590.1	1536.1	1501.8
9°	2720.4	2721.6	2614.9	2367.3	2002.0	1722.5	1554.5	1499.3	1480.9
10°	2705.7	2716.7	2641.9	2400.4	1984.8	1697.9	1515.3	1462.6	1416.0
11°	2648.0	2697.1	2655.4	2422.5	1970.1	1658.7	1480.9	1412.3	1365.7
12°	2605.1	2651.7	2656.6	2450.7	1952.9	1640.3	1451.5	1359.6	1310.5
13°	2534.0	2583.1	2644.4	2458.0	1943.1	1595.0	1414.7	1305.6	1245.6
14°	2449.4	2527.9	2624.7	2474.0	1918.6	1555.7	1378.0	1229.6	1194.1
15°	2334.2	2445.8	2590.4	2480.1	1895.3	1528.8	1332.6	1191.6	1157.3
16°	2238.6	2364.8	2543.8	2480.1	1880.6	1492.0	1283.6	1158.5	1124.2
17°	2166.2	2269.2	2505.8	2481.3	1856.1	1466.2	1234.5	1127.9	1100.9
18°	2064.5	2179.7	2445.8	2476.4	1830.3	1435.6	1192.8	1102.1	1069.0
19°	1951.7	2089.0	2382.0	2467.8	1808.3	1403.7	1148.7	1075.2	1047.0
20°	1872.0	1998.3	2319.5	2454.3	1785.0	1382.9	1125.4	1044.5	1018.8
21°	1738.4	1892.9	2257.0	2436.0	1760.5	1347.3	1093.5	1017.5	989.3
22.5°	1602.3	1744.5	2141.7	2405.3	1720.0	1303.2	1058.0	984.4	942.8
23°	1549.6	1709.0	2106.2	2396.7	1706.5	1292.1	1047.0	969.7	932.9
24°	1436.8	1602.3	2032.6	2369.8	1677.1	1255.4	1026.1	940.3	914.6
25°	1287.2	1511.6	1964.0	2341.6	1652.6	1228.4	1005.3	917.0	883.9
26°	1118.1	1387.8	1901.4	2307.2	1618.2	1191.6	977.1	894.9	848.4
27°	1013.9	1281.1	1816.9	2270.5	1593.7	1164.6	953.8	861.8	828.7
28°	930.5	1113.2	1740.8	2234.9	1564.3	1131.5	937.8	838.5	799.3
29°	839.8	1021.2	1651.3	2187.1	1532.4	1093.5	912.1	815.3	773.6
30°	787.1	923.1	1574.1	2151.5	1494.4	1067.8	881.5	792.0	750.3
32.5°	691.4	761.3	1364.5	2049.8	1422.1	994.2	831.2	728.2	692.7
35°	641.2	677.9	1097.2	1930.9	1340.0	932.9	773.6	675.5	643.6
37.5°	603.2	625.2	906.0	1803.4	1256.6	879.0	720.9	626.5	595.8
40°	565.2	582.3	750.3	1680.8	1175.7	826.3	669.4	576.2	552.9
42.5°	530.8	544.3	651.0	1559.4	1092.3	772.3	619.1	537.0	516.1
45°	492.8	505.1	593.4	1412.3	1009.0	717.2	572.5	494.1	481.8
47.5°	461.0	469.5	538.2	1281.1	926.8	664.5	524.7	459.7	451.1
50°	426.6	437.7	491.6	1135.2	852.0	613.0	484.2	429.1	421.7
52.5°	393.5	398.4	452.4	989.3	773.6	562.7	441.3	398.4	393.5
55°	349.4	369.0	405.8	839.8	695.1	516.1	397.2	366.6	362.9
57.5°	299.1	324.9	364.1	704.9	621.6	464.6	361.7	337.1	321.2
60°	240.3	270.9	322.4	586.0	556.6	418.0	324.9	286.9	267.3
62.5°	210.9	220.7	284.4	490.4	490.4	373.9	288.1	246.4	237.8
65°	183.9	191.2	244.0	405.8	426.6	324.9	255.0	213.3	206.0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	160.6	166.7	186.3	338.4	367.8	283.2	210.9	186.3	177.8
70°	137.3	142.2	159.4	275.8	313.8	241.5	177.8	159.4	153.2
72.5°	116.5	121.4	131.2	207.2	257.4	201.1	149.6	136.1	131.2
75°	96.8	99.3	109.1	154.5	207.2	160.6	120.1	111.6	109.1
77.5°	78.5	79.7	85.8	110.3	160.6	122.6	96.8	89.5	88.3
80°	60.1	61.3	66.2	79.7	117.7	88.3	72.3	68.7	66.2
82.5°	42.9	44.1	46.6	53.9	79.7	60.1	51.5	50.3	46.6
85°	27.0	27.0	29.4	33.1	45.4	34.3	31.9	30.6	29.4
87.5°	12.3	12.3	13.5	13.5	20.8	14.7	14.7	13.5	12.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)