

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: P735941

Luminaire Tested: S122RDR-S865D940-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

Test Information

Test Method: LM-79-2019
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: S122RDR-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

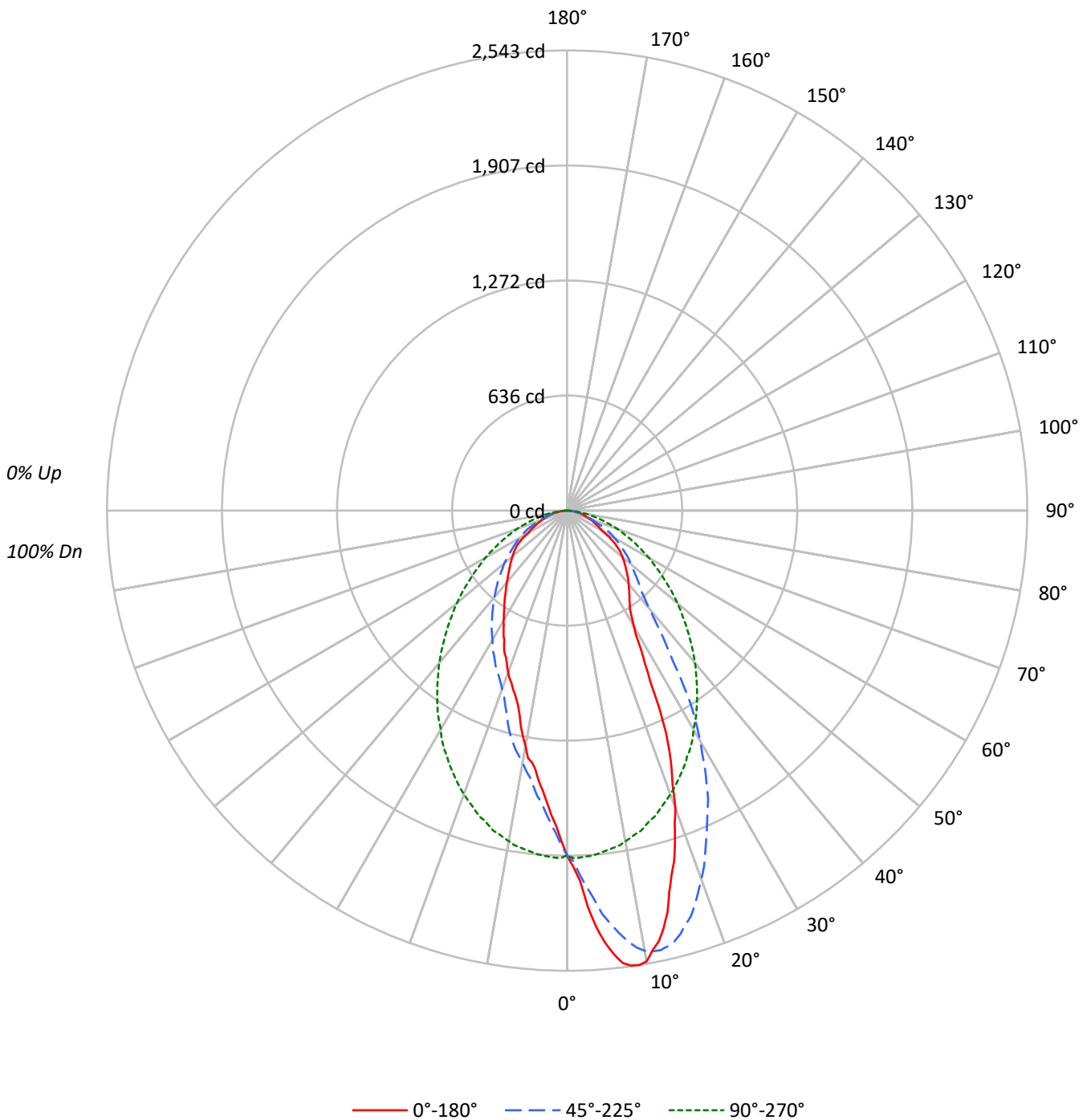
Input Watts (W): 35
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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																												
1	110	106	103	99	108	104	101	98	100	97	95	96	94	92	92	91	89	87																												
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	75																												
3	94	85	78	72	92	83	77	71	80	75	70	78	73	69	75	71	68	66																												
4	87	77	69	63	85	75	68	62	73	67	62	71	65	61	69	64	60	58																												
5	81	69	61	55	79	68	61	55	66	60	55	64	59	54	63	58	54	52																												
6	75	63	55	50	74	63	55	49	61	54	49	59	53	49	58	52	48	46																												
7	71	58	50	45	69	57	50	45	56	49	44	55	49	44	53	48	44	42																												
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38																												
9	62	50	42	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35																												
10	59	46	39	34	57	46	39	34	45	39	34	44	38	34	43	38	34	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



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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	



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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



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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

(END OF REPORT)