

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: P735857

Luminaire Tested: S122DR-S1005D927-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

Test Information

Test Method: LM-79-2019
Report Number: P735857
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2308-143-1)
Test Lab: INNOVATION CENTER
Issue Date: 1/24/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122DR-S1005D927-X4F0-XX-UDD-W-W
Description: DEFINE 2 DIRECT RECESSED WITH WALL WASH OPTIC
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3536.8 lumens
Efficiency: N/A
Efficacy: 84.6 lumens/watt
Spacing Criteria (0/90/45): 0.9 / 1.11 / 1.12
Luminous Opening: Rectangular (W 4' x L: 0.14' x H: 0')
CIE Type: Direct

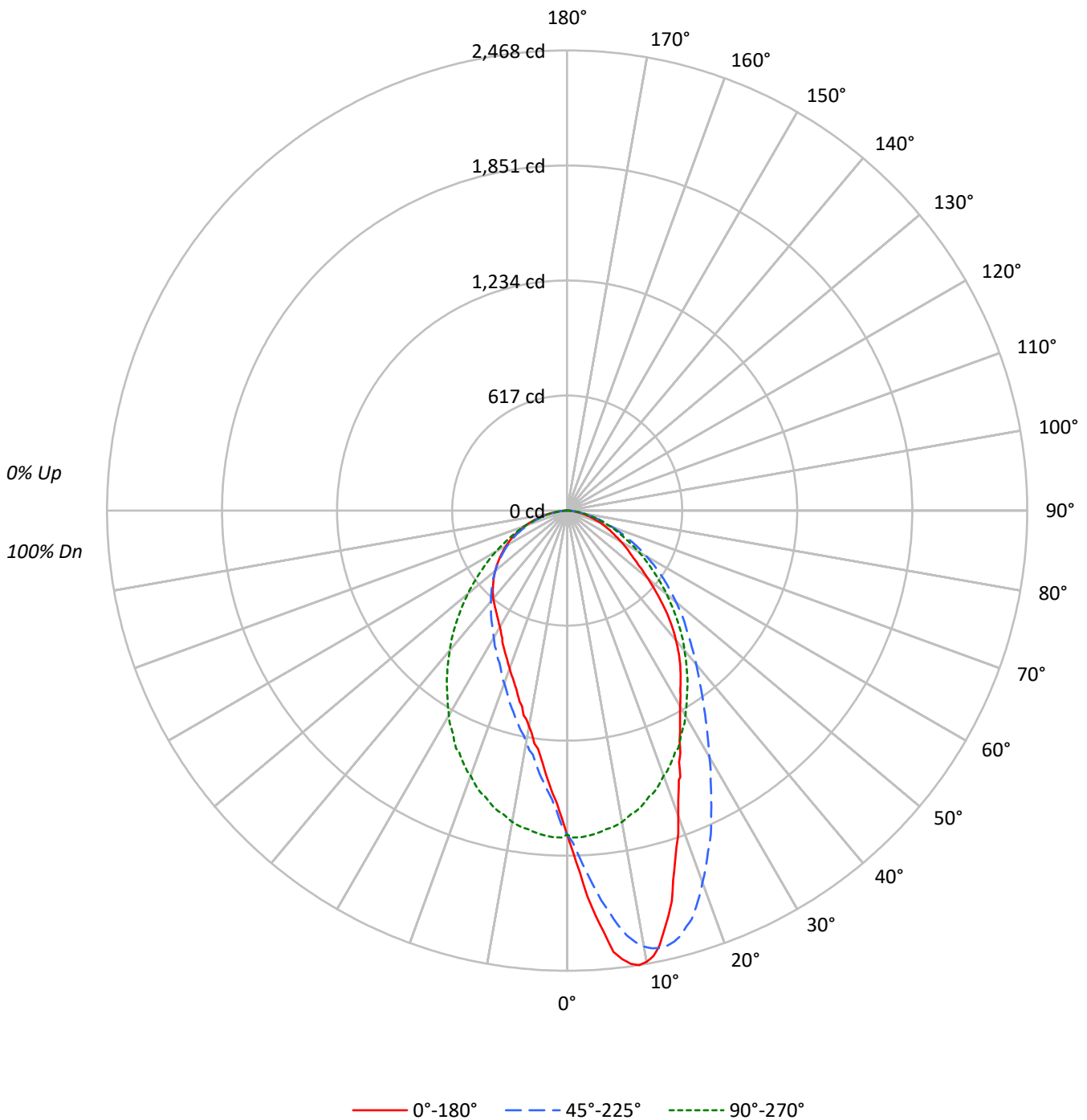
Input Watts (W): 41.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86					86			
2	101	94	87	82	98	92	86	81	88	83	79	85	81	78	82	79	76	74					74			
3	93	83	76	70	91	82	75	69	79	73	68	76	71	67	74	69	66	64					64			
4	86	75	67	60	83	73	66	60	71	64	59	69	63	58	67	62	58	56					56			
5	79	67	59	53	77	66	58	53	64	57	52	62	56	52	61	55	51	49					49			
6	74	61	53	47	72	60	52	47	59	52	46	57	51	46	55	50	46	44					44			
7	69	56	48	42	67	55	47	42	54	47	42	52	46	41	51	45	41	39					39			
8	64	51	43	38	63	51	43	38	50	43	38	48	42	37	47	41	37	35					35			
9	60	48	40	35	59	47	40	34	46	39	34	45	39	34	44	38	34	32					32			
10	57	44	37	32	55	44	36	32	43	36	31	42	36	31	41	35	31	30					30			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	33412	33412	33412	33412	33412
5°	43822	40502	33586	28168	26878
10°	47965	46357	33089	24624	22945
15°	43150	46954	32189	22230	20351
20°	35606	43426	30963	20160	18450
25°	30432	38741	29874	18648	17102
30°	26913	33836	28161	17474	16016
35°	24894	29969	26407	16653	15560
40°	22783	27039	24582	15948	15469
45°	20069	24682	22733	15459	15263
50°	16898	22756	20827	15041	15077
55°	14212	20938	18817	14534	14812
60°	12813	18921	17084	14101	14512
65°	11630	16628	15214	13422	14236
70°	10476	14370	13696	12420	13493
75°	9142	12157	11712	11266	12335
80°	7671	9519	9519	9785	10316
85°	5800	6859	7123	7631	7388

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 36243 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	171.1	4.8
10°-20°	469.5	13.3
20°-30°	615.7	17.4
30°-40°	650.8	18.4
40°-50°	604.2	17.1
50°-60°	483.6	13.7
60°-70°	330.7	9.4
70°-80°	170.7	4.8
80°-90°	40.5	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°	1256.3	35.5
0°-40°	1907.1	53.9
0°-60°	2994.9	84.7
0°-90°	3536.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3536.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1738	1738	1738	1738	1738	
5°	2271	2099	1741	1460	1393	224
15°	2168	2360	1618	1117	1023	595
25°	1435	1827	1409	879	806	661
35°	1061	1277	1125	710	663	662
45°	738	908	836	569	562	567
55°	424	625	562	434	442	389
65°	256	366	334	295	313	254
75°	123	164	158	152	166	131
85°	26	31	32	35	34	32
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°	1738.3	1738.3	1738.3	1738.3	1738.3	1738.3	1738.3	1738.3	1738.3
1°	1833.9	1824.3	1782.5	1784.9	1753.8	1719.2	1686.9	1666.6	1649.9
2°	1941.4	1922.3	1856.6	1824.3	1753.8	1679.8	1612.9	1594.9	1572.2
3°	2071.6	2026.2	1935.4	1859.0	1751.5	1643.9	1551.9	1519.7	1516.1
4°	2176.8	2136.2	2015.5	1894.8	1745.5	1609.3	1505.3	1470.7	1454.0
5°	2271.2	2244.9	2099.1	1940.2	1740.7	1575.8	1459.9	1412.2	1393.0
6°	2379.9	2326.1	2166.0	1985.6	1732.3	1543.6	1419.3	1362.0	1335.7
7°	2424.1	2390.6	2241.3	2015.5	1721.6	1506.5	1368.0	1305.8	1286.7
8°	2455.1	2442.0	2301.0	2064.5	1716.8	1471.9	1322.6	1284.3	1261.6
9°	2468.3	2457.5	2344.0	2084.8	1708.4	1454.0	1299.9	1236.5	1211.4
10°	2457.5	2462.3	2375.1	2115.8	1695.3	1416.9	1261.6	1206.7	1175.6
11°	2432.4	2444.4	2391.8	2151.7	1678.6	1387.1	1227.0	1170.8	1141.0
12°	2384.7	2410.9	2399.0	2176.8	1663.0	1360.8	1203.1	1149.3	1123.0
13°	2310.6	2369.1	2394.2	2187.5	1653.5	1330.9	1173.2	1111.1	1077.6
14°	2243.7	2304.6	2381.1	2211.4	1636.8	1297.5	1145.7	1083.6	1054.9
15°	2168.4	2238.9	2359.6	2218.6	1617.6	1270.0	1117.1	1049.0	1022.7
16°	2063.3	2157.7	2320.1	2227.0	1594.9	1238.9	1090.8	1026.3	991.6
17°	1976.1	2077.6	2290.3	2231.7	1583.0	1215.0	1068.1	991.6	968.9
18°	1896.0	2010.7	2236.5	2228.1	1563.9	1187.5	1034.6	966.5	945.0
19°	1832.7	1925.9	2182.7	2219.8	1537.6	1161.3	1009.5	948.6	923.5
20°	1740.7	1848.2	2123.0	2216.2	1513.7	1137.4	985.6	923.5	902.0
21°	1664.2	1774.2	2068.1	2204.3	1497.0	1114.7	967.7	899.6	880.5
22.5°	1563.9	1660.7	1976.1	2181.6	1459.9	1076.4	928.3	876.9	850.6
23°	1551.9	1634.4	1952.2	2174.4	1449.2	1068.1	915.2	863.8	842.3
24°	1476.7	1563.9	1896.0	2151.7	1421.7	1041.8	893.6	848.2	823.2
25°	1434.9	1506.5	1826.7	2130.2	1408.6	1017.9	879.3	827.9	806.4
26°	1376.3	1458.8	1764.6	2099.1	1379.9	996.4	856.6	810.0	789.7
27°	1333.3	1402.6	1700.1	2076.4	1346.4	973.7	838.7	792.1	767.0
28°	1291.5	1358.4	1638.0	2039.4	1322.6	948.6	825.5	776.6	752.7
29°	1248.5	1307.0	1587.8	2010.7	1299.9	927.1	805.2	756.3	733.6
30°	1212.6	1266.4	1524.5	1972.5	1268.8	902.0	787.3	741.9	721.6
32.5°	1130.2	1175.6	1395.4	1881.7	1194.7	851.8	744.3	702.5	690.5
35°	1060.9	1090.8	1277.2	1780.1	1125.4	798.1	709.7	669.0	663.1
37.5°	988.0	1016.7	1169.6	1673.8	1052.5	749.1	670.2	644.0	639.2
40°	908.0	946.2	1077.6	1568.7	979.7	701.3	635.6	615.3	616.5
42.5°	827.9	872.1	988.0	1445.6	911.6	655.9	602.1	587.8	590.2
45°	738.3	794.5	908.0	1333.3	836.3	612.9	568.7	561.5	561.5
47.5°	645.1	716.8	838.7	1217.4	764.6	569.9	536.4	531.6	534.0
50°	565.1	629.6	761.0	1105.1	696.5	530.5	503.0	501.8	504.2
52.5°	486.3	550.8	692.9	1000.0	627.2	494.6	470.7	470.7	473.1
55°	424.1	474.3	624.8	890.1	561.5	452.8	433.7	437.3	442.0
57.5°	381.1	414.6	557.9	784.9	500.6	412.2	400.2	402.6	408.6
60°	333.3	359.6	492.2	688.2	444.4	372.8	366.8	371.6	377.5
62.5°	290.3	313.0	430.1	600.9	383.5	334.5	332.1	339.3	345.3
65°	255.7	271.2	365.6	512.5	334.5	296.3	295.1	305.8	313.0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	219.8	231.8	309.4	428.9	285.5	258.1	258.1	270.0	276.0
70°	186.4	195.9	255.7	353.6	243.7	219.8	221.0	235.4	240.1
72.5°	151.7	160.1	207.9	284.3	197.1	184.0	187.6	199.5	204.3
75°	123.1	129.0	163.7	224.6	157.7	147.0	151.7	162.5	166.1
77.5°	94.4	99.2	120.7	164.9	120.7	114.7	119.5	129.0	129.0
80°	69.3	70.5	86.0	115.9	86.0	82.4	88.4	93.2	93.2
82.5°	45.4	47.8	56.2	74.1	57.3	56.2	58.5	62.1	62.1
85°	26.3	27.5	31.1	40.6	32.3	32.3	34.6	34.6	33.5
87.5°	10.8	11.9	13.1	15.5	14.3	15.5	15.5	13.1	14.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)