

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: P735895

Luminaire Tested: S122DRP-S865D935-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

Test Information

Test Method: LM-79-2024
Report Number: P735895
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: S122DRP-S865D935-X4F0-XX-UDD-W-W
Description: DEFINE 2 DIRECT RECESSED WITH WALL WASH OPTIC
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

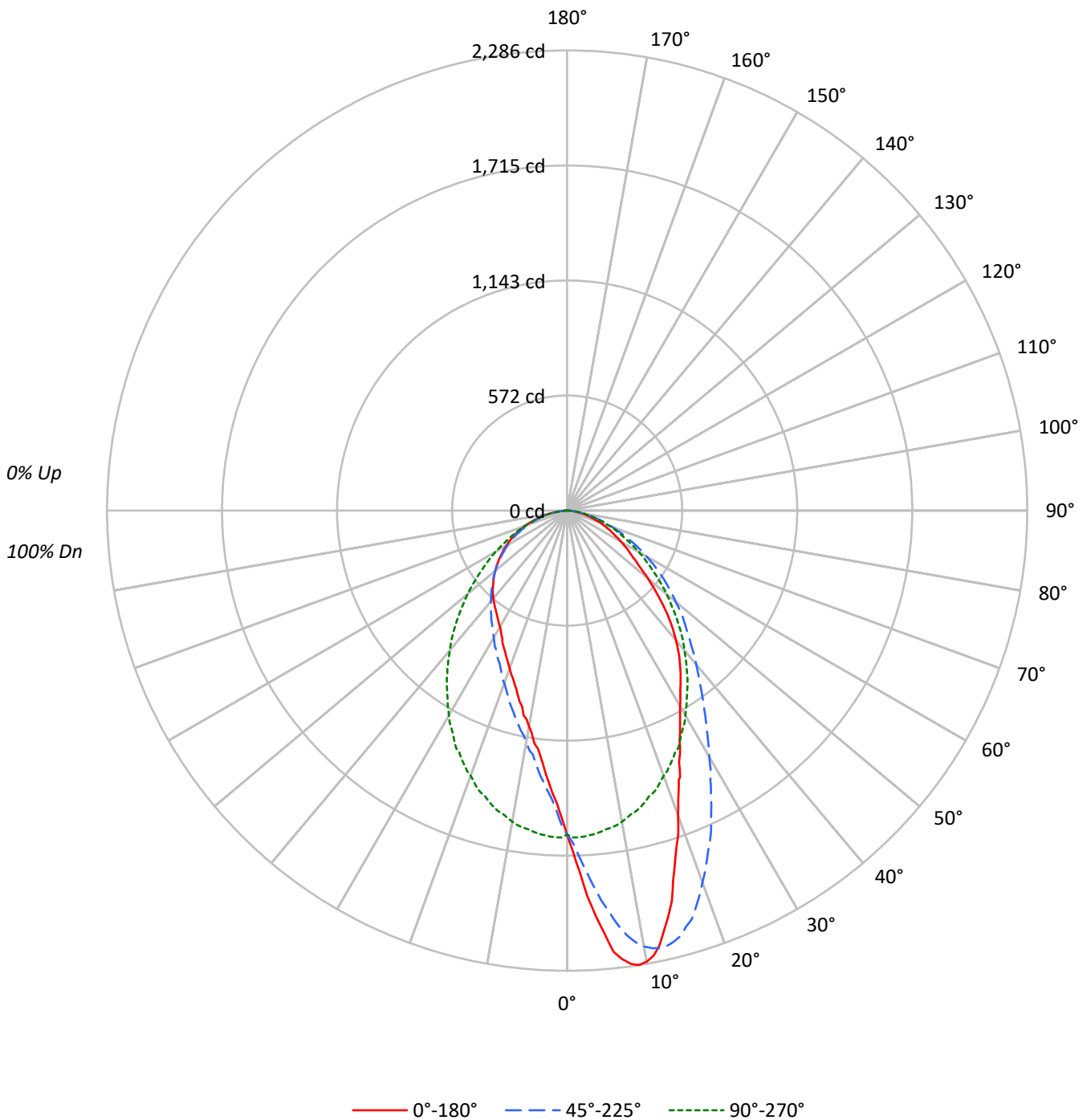
Lumens per Lamp: N/A
Luminaire Lumens: 3275.5 lumens
Efficiency: N/A
Efficacy: 93.6 lumens/watt
Spacing Criteria (0/90/45): 0.9 / 1.11 / 1.12
Luminous Opening: Rectangular (W 4' x L: 0.14' x H: 0')
CIE Type: Direct

Input Watts (W): 35
Input Voltage (V): 120
Input Current (A_{in}): 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°	30944	30944	30944	30944	30944
5°	40583	37509	31105	26088	24892
10°	44421	42931	30643	22805	21249
15°	39962	43484	29811	20586	18847
20°	32975	40216	28674	18671	17088
25°	28182	35878	27666	17270	15838
30°	24925	31335	26079	16182	14833
35°	23054	27754	24457	15421	14410
40°	21100	25041	22766	14769	14325
45°	18588	22858	21053	14317	14135
50°	15648	21076	19287	13929	13962
55°	13163	19393	17426	13458	13720
60°	11867	17522	15823	13059	13440
65°	10770	15400	14090	12430	13185
70°	9700	13308	12684	11504	12499
75°	8466	11259	10843	10434	11422
80°	7106	8822	8822	9066	9553
85°	5359	6352	6594	7079	6837

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 33566 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	158.4	4.8
10°-20°	434.8	13.3
20°-30°	570.2	17.4
30°-40°	602.7	18.4
40°-50°	559.6	17.1
50°-60°	447.9	13.7
60°-70°	306.3	9.4
70°-80°	158.1	4.8
80°-90°	37.5	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°	1163.5	35.5
0°-40°	1766.2	53.9
0°-60°	2773.6	84.7
0°-90°	3275.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3275.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1610	1610	1610	1610	1610	
5°	2103	1944	1612	1352	1290	207
15°	2008	2185	1498	1034	947	551
25°	1329	1692	1304	814	747	612
35°	982	1183	1042	657	614	613
45°	684	841	774	527	520	525
55°	393	579	520	402	409	360
65°	237	339	310	273	290	235
75°	114	152	146	140	154	121
85°	24	29	30	32	31	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°	1609.9	1609.9	1609.9	1609.9	1609.9	1609.9	1609.9	1609.9	1609.9
1°	1698.4	1689.5	1650.8	1653.0	1624.2	1592.2	1562.3	1543.5	1528.0
2°	1797.9	1780.2	1719.4	1689.5	1624.2	1555.6	1493.7	1477.1	1456.1
3°	1918.5	1876.5	1792.4	1721.6	1622.0	1522.4	1437.3	1407.4	1404.1
4°	2015.9	1978.3	1866.5	1754.8	1616.5	1490.4	1394.1	1362.0	1346.5
5°	2103.3	2079.0	1944.0	1796.8	1612.1	1459.4	1352.1	1307.8	1290.1
6°	2204.0	2154.2	2006.0	1838.9	1604.3	1429.5	1314.4	1261.3	1237.0
7°	2244.9	2214.0	2075.7	1866.5	1594.4	1395.2	1266.9	1209.3	1191.6
8°	2273.7	2261.5	2131.0	1911.9	1589.9	1363.1	1224.8	1189.4	1168.4
9°	2285.9	2275.9	2170.8	1930.7	1582.2	1346.5	1203.8	1145.2	1121.9
10°	2275.9	2280.4	2199.6	1959.5	1570.0	1312.2	1168.4	1117.5	1088.7
11°	2252.7	2263.8	2215.1	1992.7	1554.5	1284.6	1136.3	1084.3	1056.6
12°	2208.4	2232.8	2221.7	2015.9	1540.2	1260.2	1114.2	1064.4	1040.0
13°	2139.8	2194.1	2217.3	2025.9	1531.3	1232.6	1086.5	1029.0	998.0
14°	2077.9	2134.3	2205.1	2048.0	1515.8	1201.6	1061.1	1003.5	977.0
15°	2008.2	2073.4	2185.2	2054.6	1498.1	1176.1	1034.5	971.4	947.1
16°	1910.8	1998.2	2148.7	2062.4	1477.1	1147.4	1010.2	950.4	918.3
17°	1830.0	1924.1	2121.0	2066.8	1466.0	1125.2	989.1	918.3	897.3
18°	1755.9	1862.1	2071.2	2063.5	1448.3	1099.8	958.2	895.1	875.2
19°	1697.3	1783.6	2021.4	2055.7	1424.0	1075.4	934.9	878.5	855.3
20°	1612.1	1711.6	1966.1	2052.4	1401.8	1053.3	912.8	855.3	835.4
21°	1541.3	1643.0	1915.2	2041.4	1386.4	1032.3	896.2	833.1	815.4
22.5°	1448.3	1537.9	1830.0	2020.3	1352.1	996.9	859.7	812.1	787.8
23°	1437.3	1513.6	1807.9	2013.7	1342.1	989.1	847.5	799.9	780.0
24°	1367.5	1448.3	1755.9	1992.7	1316.7	964.8	827.6	785.6	762.3
25°	1328.8	1395.2	1691.7	1972.8	1304.5	942.7	814.3	766.8	746.8
26°	1274.6	1351.0	1634.2	1944.0	1277.9	922.8	793.3	750.2	731.4
27°	1234.8	1298.9	1574.4	1923.0	1246.9	901.7	776.7	733.6	710.3
28°	1196.1	1258.0	1516.9	1888.7	1224.8	878.5	764.5	719.2	697.1
29°	1156.2	1210.4	1470.4	1862.1	1203.8	858.6	745.7	700.4	679.3
30°	1123.0	1172.8	1411.8	1826.7	1175.0	835.4	729.1	687.1	668.3
32.5°	1046.7	1088.7	1292.3	1742.6	1106.4	788.9	689.3	650.6	639.5
35°	982.5	1010.2	1182.8	1648.6	1042.3	739.1	657.2	619.6	614.1
37.5°	915.0	941.6	1083.2	1550.1	974.8	693.7	620.7	596.4	591.9
40°	840.9	876.3	998.0	1452.7	907.3	649.5	588.6	569.8	570.9
42.5°	766.8	807.7	915.0	1338.8	844.2	607.4	557.6	544.4	546.6
45°	683.8	735.8	840.9	1234.8	774.5	567.6	526.7	520.0	520.0
47.5°	597.5	663.9	776.7	1127.5	708.1	527.8	496.8	492.4	494.6
50°	523.3	583.1	704.8	1023.4	645.0	491.3	465.8	464.7	466.9
52.5°	450.3	510.1	641.7	926.1	580.9	458.1	435.9	435.9	438.1
55°	392.8	439.3	578.7	824.3	520.0	419.3	401.6	405.0	409.4
57.5°	353.0	383.9	516.7	726.9	463.6	381.7	370.7	372.9	378.4
60°	308.7	333.0	455.8	637.3	411.6	345.2	339.7	344.1	349.6
62.5°	268.9	289.9	398.3	556.5	355.2	309.8	307.6	314.2	319.8
65°	236.8	251.2	338.6	474.7	309.8	274.4	273.3	283.2	289.9



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	203.6	214.6	286.6	397.2	264.4	239.0	239.0	250.1	255.6
70°	172.6	181.5	236.8	327.5	225.7	203.6	204.7	218.0	222.4
72.5°	140.5	148.3	192.5	263.3	182.6	170.4	173.7	184.8	189.2
75°	114.0	119.5	151.6	208.0	146.0	136.1	140.5	150.5	153.8
77.5°	87.4	91.8	111.7	152.7	111.7	106.2	110.6	119.5	119.5
80°	64.2	65.3	79.7	107.3	79.7	76.3	81.9	86.3	86.3
82.5°	42.0	44.3	52.0	68.6	53.1	52.0	54.2	57.5	57.5
85°	24.3	25.4	28.8	37.6	29.9	29.9	32.1	32.1	31.0
87.5°	10.0	11.1	12.2	14.4	13.3	14.4	14.4	12.2	13.3
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	21.14	22.67	21.51	22.98	23.29	20.72	22.24	21.08	22.56	22.87
	3H	22.34	23.71	22.72	24.04	24.40	22.23	23.60	22.61	23.93	24.29
	4H	22.74	24.03	23.14	24.37	24.75	22.76	24.04	23.16	24.39	24.77
	6H	22.99	24.18	23.41	24.55	24.94	23.11	24.30	23.52	24.66	25.05
	8H	23.06	24.19	23.48	24.58	24.98	23.21	24.34	23.63	24.73	25.13
	12H	23.09	24.17	23.52	24.55	24.98	23.26	24.34	23.69	24.72	25.15
4H	2H	22.20	23.48	22.60	23.83	24.21	21.79	23.07	22.19	23.42	23.80
	3H	23.56	24.63	23.97	25.03	25.43	23.42	24.48	23.83	24.88	25.28
	4H	24.02	24.98	24.46	25.40	25.84	24.00	24.96	24.43	25.37	25.81
	6H	24.34	25.17	24.79	25.61	26.07	24.42	25.25	24.87	25.69	26.15
	8H	24.41	25.19	24.88	25.64	26.11	24.53	25.31	25.00	25.76	26.22
	12H	24.46	25.16	24.95	25.64	26.11	24.61	25.31	25.09	25.78	26.26
8H	4H	24.38	25.16	24.84	25.60	26.07	24.34	25.12	24.80	25.56	26.03
	6H	24.78	25.43	25.28	25.92	26.39	24.86	25.50	25.35	25.99	26.47
	8H	24.90	25.48	25.42	25.99	26.48	25.02	25.60	25.54	26.11	26.60
	12H	24.99	25.50	25.50	25.99	26.56	25.15	25.66	25.66	26.15	26.71
12H	4H	24.40	25.10	24.88	25.58	26.05	24.35	25.05	24.84	25.53	26.00
	6H	24.83	25.40	25.34	25.91	26.40	24.90	25.48	25.41	25.99	26.47
	8H	25.00	25.51	25.51	26.00	26.56	25.12	25.63	25.63	26.12	26.68