

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: P735885

Luminaire Tested: S122DRP-S675D930-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

Test Information

Test Method: LM-79-2024
Report Number: P735885
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-S675D930-X4F0-XX-UDD-W-W
Description: DEFINE 2 DIRECT RECESSED WITH WALL WASH OPTIC
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

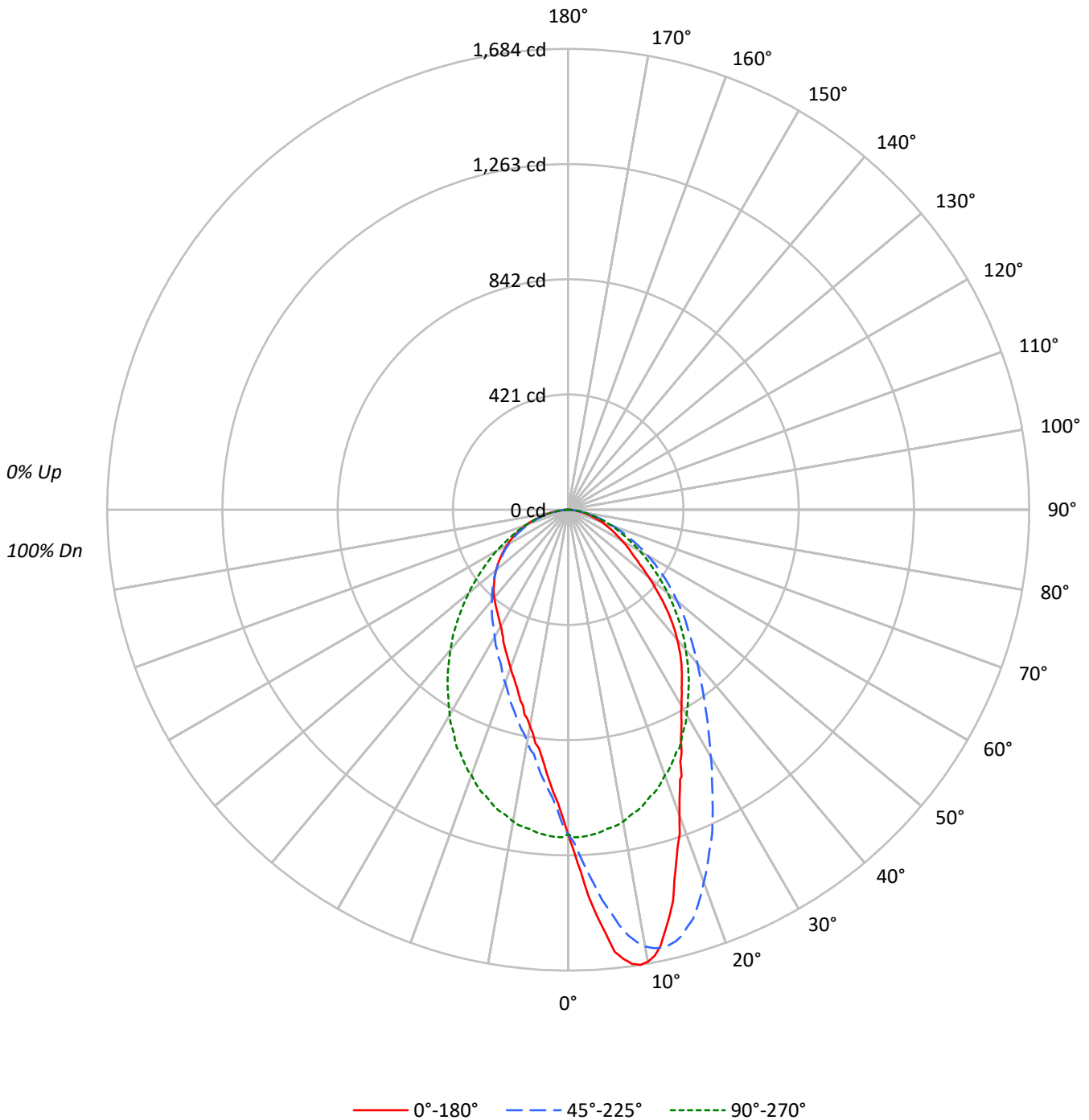
Lumens per Lamp: N/A
Luminaire Lumens: 2413.6 lumens
Efficiency: N/A
Efficacy: 92.8 lumens/watt
Spacing Criteria (0/90/45): 0.9 / 1.11 / 1.12
Luminous Opening: Rectangular (W 4' x L: 0.14' x H: 0')
CIE Type: Direct

Input Watts (W): 26
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				
2	101	94	87	82	98	92	86	81	88	83	79	85	81	78	82	79	76					74				
3	93	83	76	70	91	82	75	69	79	73	68	76	71	67	74	69	66					64				
4	86	75	67	60	83	73	66	60	71	64	59	69	63	58	67	62	58					56				
5	79	67	59	53	77	66	58	53	64	57	52	62	56	52	61	55	51					49				
6	74	61	53	47	72	60	52	47	59	52	46	57	51	46	55	50	46					44				
7	69	56	48	42	67	55	47	42	54	47	42	52	46	41	51	45	41					39				
8	64	51	43	38	63	51	43	38	50	43	38	48	42	37	47	41	37					35				
9	60	48	40	35	59	47	40	34	46	39	34	45	39	34	44	38	34					32				
10	57	44	37	32	55	44	36	32	43	36	31	42	36	31	41	35	31					30				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	22802	22802	22802	22802	22802
5°	29905	27640	22920	19223	18342
10°	32733	31634	22580	16805	15659
15°	29447	32042	21967	15169	13888
20°	24298	29635	21130	13758	12590
25°	20767	26438	20385	12727	11671
30°	18366	23089	19216	11925	10929
35°	16989	20452	18021	11364	10618
40°	15547	18452	16774	10882	10556
45°	13698	16843	15513	10550	10417
50°	11531	15529	14213	10263	10290
55°	9698	14289	12842	9919	10110
60°	8746	12913	11660	9622	9903
65°	7937	11348	10383	9160	9715
70°	7149	9807	9346	8475	9211
75°	6238	8295	7991	7686	8414
80°	5236	6498	6498	6675	7040
85°	3948	4675	4852	5205	5028

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 24734 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	116.7	4.8
10°-20°	320.4	13.3
20°-30°	420.2	17.4
30°-40°	444.1	18.4
40°-50°	412.3	17.1
50°-60°	330.0	13.7
60°-70°	225.7	9.4
70°-80°	116.5	4.8
80°-90°	27.7	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°	857.3	35.5
0°-40°	1301.4	53.9
0°-60°	2043.8	84.7
0°-90°	2413.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2413.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1186	1186	1186	1186	1186	
5°	1550	1432	1188	996	951	153
15°	1480	1610	1104	762	698	406
25°	979	1247	961	600	550	451
35°	724	872	768	484	452	452
45°	504	620	571	388	383	387
55°	289	426	383	296	302	265
65°	174	250	228	201	214	173
75°	84	112	108	104	113	89
85°	18	21	22	24	23	22
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°	1186.3	1186.3	1186.3	1186.3	1186.3	1186.3	1186.3	1186.3	1186.3
1°	1251.5	1245.0	1216.4	1218.1	1196.9	1173.2	1151.2	1137.3	1125.9
2°	1324.9	1311.8	1267.0	1245.0	1196.9	1146.3	1100.7	1088.4	1072.9
3°	1413.7	1382.7	1320.8	1268.6	1195.2	1121.8	1059.1	1037.1	1034.6
4°	1485.5	1457.8	1375.4	1293.1	1191.1	1098.2	1027.3	1003.6	992.2
5°	1549.9	1531.9	1432.5	1324.0	1187.9	1075.4	996.3	963.7	950.6
6°	1624.1	1587.4	1478.1	1355.0	1182.2	1053.4	968.6	929.4	911.5
7°	1654.2	1631.4	1529.5	1375.4	1174.8	1028.1	933.5	891.1	878.1
8°	1675.4	1666.5	1570.3	1408.8	1171.6	1004.4	902.5	876.4	861.0
9°	1684.4	1677.1	1599.6	1422.7	1165.9	992.2	887.0	843.8	826.7
10°	1677.1	1680.3	1620.8	1443.9	1156.9	966.9	861.0	823.5	802.3
11°	1659.9	1668.1	1632.2	1468.4	1145.5	946.6	837.3	799.0	778.6
12°	1627.3	1645.3	1637.1	1485.5	1134.9	928.6	821.0	784.3	766.4
13°	1576.8	1616.7	1633.9	1492.8	1128.4	908.2	800.6	758.2	735.4
14°	1531.1	1572.7	1624.9	1509.1	1117.0	885.4	781.9	739.5	719.9
15°	1479.8	1527.9	1610.2	1514.0	1103.9	866.7	762.3	715.8	697.9
16°	1408.0	1472.4	1583.3	1519.7	1088.4	845.5	744.4	700.3	676.7
17°	1348.5	1417.8	1562.9	1523.0	1080.3	829.2	728.9	676.7	661.2
18°	1293.9	1372.1	1526.2	1520.5	1067.2	810.4	706.0	659.6	644.9
19°	1250.7	1314.3	1489.5	1514.8	1049.3	792.5	688.9	647.3	630.2
20°	1187.9	1261.3	1448.8	1512.4	1033.0	776.2	672.6	630.2	615.5
21°	1135.7	1210.7	1411.3	1504.2	1021.6	760.7	660.4	613.9	600.9
22.5°	1067.2	1133.3	1348.5	1488.7	996.3	734.6	633.5	598.4	580.5
23°	1059.1	1115.3	1332.2	1483.8	989.0	728.9	624.5	589.5	574.8
24°	1007.7	1067.2	1293.9	1468.4	970.2	710.9	609.8	578.9	561.7
25°	979.2	1028.1	1246.6	1453.7	961.2	694.6	600.1	565.0	550.3
26°	939.2	995.5	1204.2	1432.5	941.7	680.0	584.6	552.8	538.9
27°	909.9	957.2	1160.2	1417.0	918.8	664.5	572.3	540.5	523.4
28°	881.3	927.0	1117.8	1391.7	902.5	647.3	563.4	529.9	513.6
29°	852.0	891.9	1083.5	1372.1	887.0	632.7	549.5	516.1	500.6
30°	827.5	864.2	1040.3	1346.1	865.8	615.5	537.3	506.3	492.4
32.5°	771.3	802.3	952.3	1284.1	815.3	581.3	507.9	479.4	471.2
35°	724.0	744.4	871.6	1214.8	768.0	544.6	484.3	456.6	452.5
37.5°	674.3	693.8	798.2	1142.2	718.3	511.2	457.4	439.4	436.2
40°	619.6	645.7	735.4	1070.5	668.5	478.6	433.7	419.9	420.7
42.5°	565.0	595.2	674.3	986.5	622.1	447.6	410.9	401.1	402.8
45°	503.9	542.2	619.6	909.9	570.7	418.2	388.1	383.2	383.2
47.5°	440.3	489.2	572.3	830.8	521.8	388.9	366.1	362.8	364.4
50°	385.6	429.7	519.3	754.2	475.3	362.0	343.2	342.4	344.1
52.5°	331.8	375.9	472.9	682.4	428.0	337.5	321.2	321.2	322.9
55°	289.4	323.7	426.4	607.4	383.2	309.0	296.0	298.4	301.7
57.5°	260.1	282.9	380.7	535.7	341.6	281.3	273.1	274.8	278.8
60°	227.5	245.4	335.9	469.6	303.3	254.4	250.3	253.6	257.6
62.5°	198.1	213.6	293.5	410.1	261.7	228.3	226.7	231.5	235.6
65°	174.5	185.1	249.5	349.8	228.3	202.2	201.4	208.7	213.6



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	150.0	158.2	211.2	292.7	194.9	176.1	176.1	184.3	188.3
70°	127.2	133.7	174.5	241.3	166.3	150.0	150.8	160.6	163.9
72.5°	103.5	109.2	141.9	194.0	134.5	125.6	128.0	136.2	139.4
75°	84.0	88.1	111.7	153.3	107.6	100.3	103.5	110.9	113.3
77.5°	64.4	67.7	82.3	112.5	82.3	78.3	81.5	88.1	88.1
80°	47.3	48.1	58.7	79.1	58.7	56.3	60.3	63.6	63.6
82.5°	31.0	32.6	38.3	50.5	39.1	38.3	39.9	42.4	42.4
85°	17.9	18.8	21.2	27.7	22.0	22.0	23.6	23.6	22.8
87.5°	7.3	8.2	9.0	10.6	9.8	10.6	10.6	9.0	9.8
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	20.08	21.60	20.45	21.92	22.23	19.66	21.18	20.02	21.49	21.81
	3H	21.28	22.65	21.66	22.98	23.34	21.17	22.54	21.55	22.87	23.23
	4H	21.68	22.96	22.08	23.31	23.69	21.70	22.98	22.10	23.33	23.71
	6H	21.93	23.12	22.35	23.49	23.88	22.05	23.24	22.46	23.60	23.99
	8H	22.00	23.13	22.42	23.51	23.92	22.15	23.28	22.57	23.66	24.07
	12H	22.03	23.11	22.46	23.49	23.92	22.20	23.28	22.63	23.66	24.09
4H	2H	21.14	22.42	21.54	22.77	23.15	20.73	22.01	21.13	22.36	22.74
	3H	22.50	23.57	22.91	23.97	24.37	22.35	23.42	22.77	23.82	24.22
	4H	22.96	23.92	23.40	24.34	24.78	22.94	23.89	23.37	24.31	24.75
	6H	23.28	24.11	23.73	24.55	25.01	23.36	24.19	23.81	24.63	25.09
	8H	23.35	24.13	23.82	24.58	25.04	23.47	24.25	23.94	24.70	25.16
	12H	23.40	24.10	23.88	24.58	25.05	23.55	24.24	24.03	24.72	25.19
8H	4H	23.32	24.10	23.78	24.54	25.01	23.28	24.06	23.74	24.50	24.97
	6H	23.72	24.36	24.22	24.86	25.33	23.80	24.44	24.29	24.93	25.41
	8H	23.84	24.42	24.36	24.93	25.42	23.96	24.54	24.48	25.05	25.54
	12H	23.93	24.44	24.44	24.93	25.50	24.09	24.60	24.60	25.09	25.65
12H	4H	23.34	24.04	23.82	24.52	24.99	23.29	23.99	23.78	24.47	24.94
	6H	23.77	24.34	24.28	24.85	25.34	23.84	24.42	24.35	24.93	25.41
	8H	23.94	24.44	24.44	24.94	25.50	24.06	24.56	24.56	25.06	25.62