

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: P243457

Luminaire Tested: S124DRP-H1020D927-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-2024  
Report Number: P243457  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-84)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124DRP-H1020D927-X4F0-XX-UDD-F-W  
Description: DEFINE 4 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: (184) 2700K CCT, 90 CRI LEDS  
Ballast/Driver: -

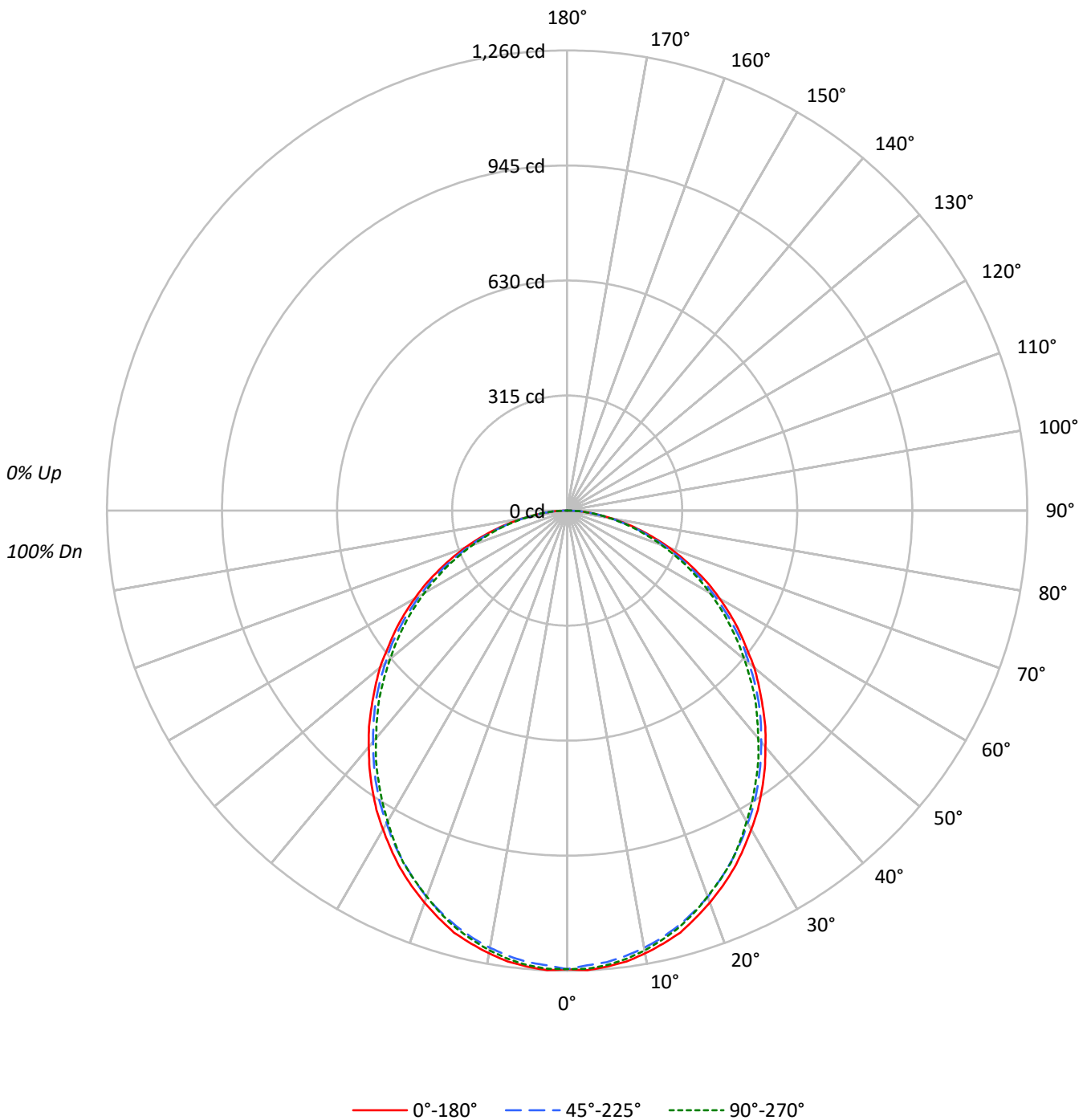
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3232.3 lumens  
Efficiency: N/A  
Efficacy: 102.6 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.3  
Luminous Opening: Rectangular (W 0.31' x L: 3.88' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 31.5  
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

TEST NUMBER: P243457

CATALOG NUMBER: S124DRP-H1020D927-X4F0-XX-UDD-F-W

### Luminous Intensity Polar Plot





TEST NUMBER: P243457

CATALOG NUMBER: S124DRP-H1020D927-X4F0-XX-UDD-F-W

**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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84
2	99	91	84	79	97	89	83	78	86	80	76	82	78	74	79	76	73	70
3	91	80	72	66	88	79	71	65	76	69	64	73	67	63	70	66	62	60
4	83	71	63	56	81	70	62	56	67	60	55	65	59	54	63	58	53	51
5	77	64	55	48	74	63	54	48	61	53	48	59	52	47	57	51	47	44
6	71	58	49	42	69	57	48	42	55	47	42	53	46	41	52	46	41	39
7	66	52	44	38	64	51	43	37	50	43	37	48	42	37	47	41	37	35
8	61	48	39	34	60	47	39	33	46	38	33	45	38	33	43	37	33	31
9	57	44	36	30	56	43	36	30	42	35	30	41	35	30	40	34	30	28
10	54	41	33	28	52	40	33	27	39	32	27	38	32	27	37	31	27	25

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	11161	11161	11161
5°	11185	11076	11148
10°	11112	10973	11038
15°	11009	10830	10877
20°	10805	10649	10640
25°	10601	10411	10421
30°	10349	10150	10087
35°	10099	9900	9778
40°	9804	9590	9448
45°	9516	9324	9144
50°	9254	8986	8759
55°	8914	8675	8407
60°	8572	8283	8028
65°	8165	7885	7629
70°	7727	7381	7142
75°	7123	6841	6632
80°	6276	6173	6015
85°	5518	5518	5416

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 9516 cd/sqm



TEST NUMBER: P243457

CATALOG NUMBER: S124DRP-H1020D927-X4F0-XX-UDD-F-W

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	118.4	3.7
10°-20°	333.7	10.3
20°-30°	491.5	15.2
30°-40°	571.8	17.7
40°-50°	572.1	17.7
50°-60°	500.3	15.5
60°-70°	371.6	11.5
70°-80°	211.7	6.6
80°-90°	61.0	1.9
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°	943.6	29.2
0°-40°	1515.5	46.9
0°-60°	2588.0	80.1
0°-90°	3232.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3232.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1256	1256	1256	1256	1256	
5°	1254	1252	1241	1250	1249	119
15°	1196	1190	1177	1184	1182	337
25°	1081	1076	1062	1064	1062	497
35°	931	922	912	904	901	582
45°	757	754	742	730	727	585
55°	575	571	560	548	542	514
65°	388	385	375	367	363	385
75°	207	203	199	195	193	220
85°	54	53	54	52	53	62
90°	0	0	0	0	0	



TEST NUMBER: P243457

CATALOG NUMBER: S124DRP-H1020D927-X4F0-XX-UDD-F-W

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1255.6	1255.6	1255.6	1255.6	1255.6
2.5°	1259.7	1256.6	1246.4	1256.6	1255.6
5°	1253.5	1251.5	1241.3	1250.5	1249.4
7.5°	1245.4	1241.3	1230.0	1239.2	1238.2
10°	1231.1	1228.0	1215.7	1224.9	1222.9
12.5°	1214.7	1211.6	1198.4	1205.5	1203.5
15°	1196.3	1190.2	1176.9	1184.1	1182.0
17.5°	1169.8	1165.7	1152.4	1158.5	1155.5
20°	1142.2	1137.1	1125.8	1126.8	1124.8
22.5°	1112.5	1107.4	1094.2	1098.2	1094.2
25°	1080.9	1075.8	1061.5	1064.5	1062.5
27.5°	1045.1	1040.0	1026.7	1027.8	1023.7
30°	1008.3	1002.2	988.9	987.9	982.8
32.5°	971.6	965.4	952.2	948.1	943.0
35°	930.7	922.5	912.3	904.1	901.1
37.5°	888.8	884.7	869.4	864.3	860.2
40°	844.9	840.8	826.5	819.3	814.2
42.5°	803.0	797.9	784.6	774.4	770.3
45°	757.0	754.0	741.7	730.5	727.4
47.5°	712.1	711.0	695.7	684.5	679.4
50°	669.2	663.0	649.8	639.5	633.4
52.5°	619.1	618.1	606.8	593.6	588.5
55°	575.2	571.1	559.8	547.6	542.5
57.5°	529.2	527.2	512.9	502.6	497.5
60°	482.2	478.1	465.9	456.7	451.6
62.5°	437.3	432.1	420.9	411.7	406.6
65°	388.2	385.2	374.9	366.8	362.7
67.5°	342.2	338.2	327.9	320.8	316.7
70°	297.3	291.2	284.0	277.9	274.8
72.5°	252.3	247.2	241.1	237.0	232.9
75°	207.4	203.3	199.2	195.1	193.1
77.5°	164.5	160.4	158.4	157.3	155.3
80°	122.6	120.6	120.6	119.5	117.5
82.5°	86.8	84.8	84.8	84.8	83.8
85°	54.1	53.1	54.1	52.1	53.1
87.5°	25.5	25.5	26.6	25.5	26.6
90°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P243457  
 CATALOG NUMBER: S124DRP-H1020D927-X4F0-XX-UDD-F-W

**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	19.68	21.30	20.05	21.61	21.92	19.33	20.95	19.70	21.26	21.57
	3H	21.43	22.89	21.81	23.22	23.58	21.04	22.50	21.42	22.83	23.19
	4H	22.09	23.46	22.49	23.81	24.19	21.69	23.07	22.09	23.41	23.79
	6H	22.56	23.84	22.98	24.20	24.59	22.18	23.45	22.59	23.82	24.21
	8H	22.72	23.93	23.14	24.32	24.72	22.34	23.56	22.77	23.95	24.35
	12H	22.82	23.99	23.25	24.37	24.80	22.46	23.62	22.88	24.00	24.43
4H	2H	20.25	21.63	20.65	21.97	22.35	19.98	21.35	20.37	21.70	22.07
	3H	22.23	23.38	22.64	23.77	24.17	21.91	23.06	22.32	23.46	23.86
	4H	23.01	24.05	23.44	24.47	24.90	22.68	23.72	23.11	24.14	24.57
	6H	23.61	24.52	24.07	24.96	25.42	23.30	24.21	23.75	24.65	25.11
	8H	23.81	24.67	24.27	25.11	25.57	23.51	24.36	23.97	24.80	25.27
	12H	23.96	24.73	24.44	25.20	25.67	23.67	24.43	24.15	24.91	25.38
8H	4H	23.29	24.15	23.75	24.59	25.05	23.00	23.86	23.46	24.30	24.76
	6H	24.01	24.72	24.51	25.21	25.69	23.75	24.45	24.24	24.94	25.42
	8H	24.29	24.92	24.80	25.43	25.91	24.03	24.67	24.54	25.17	25.66
	12H	24.51	25.07	25.02	25.56	26.13	24.27	24.83	24.77	25.32	25.88
12H	4H	23.32	24.09	23.80	24.56	25.03	23.04	23.80	23.52	24.28	24.75
	6H	24.07	24.70	24.57	25.21	25.69	23.80	24.44	24.31	24.95	25.43
	8H	24.39	24.96	24.90	25.45	26.01	24.15	24.71	24.66	25.20	25.76