

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: P242774

Luminaire Tested: S125DRP-S1090D830-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-2024  
Report Number: P242774  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-12)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S125DRP-S1090D830-X4F0-XX-UDD-F-W  
Description: DEFINE 5 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER  
STANDARD LIGHT ENGINE  
Light Source: (92) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

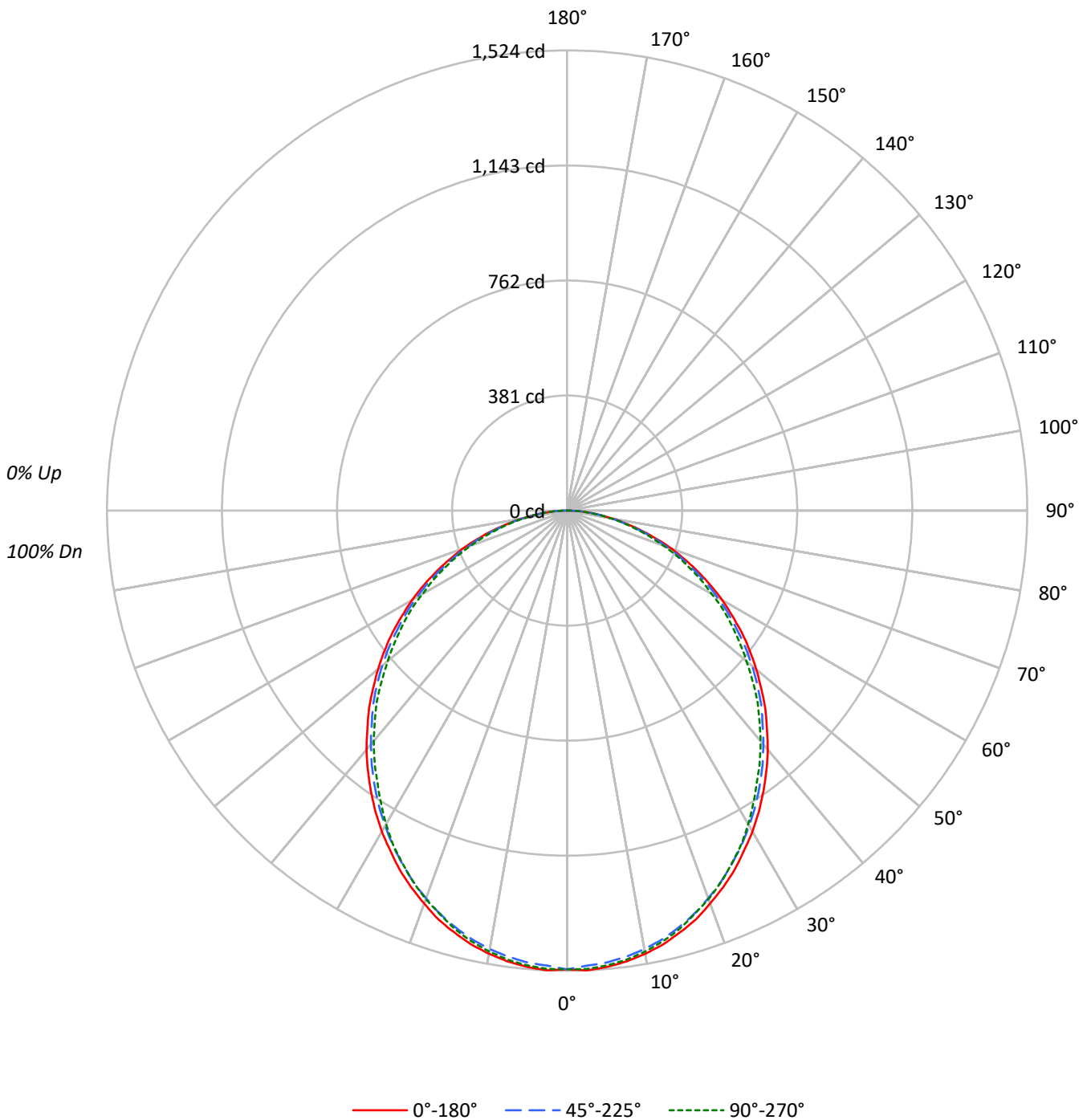
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3954.4 lumens  
Efficiency: N/A  
Efficacy: 113.6 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.18 / 1.3  
Luminous Opening: Rectangular (W 0.39' x L: 3.88' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 34.8  
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

TEST NUMBER: P242774

CATALOG NUMBER: S125DRP-S1090D830-X4F0-XX-UDD-F-W

### Luminous Intensity Polar Plot





TEST NUMBER: P242774

CATALOG NUMBER: S125DRP-S1090D830-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	94	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	72	70
3	91	80	72	66	88	79	71	65	76	69	64	73	67	63	70	66	62	59
4	83	71	62	56	81	70	62	55	67	60	55	65	59	54	63	58	53	51
5	76	64	55	48	74	63	54	48	60	53	47	58	52	47	57	51	46	44
6	71	57	49	42	69	56	48	42	55	47	42	53	46	41	51	46	41	39
7	66	52	43	37	64	51	43	37	50	42	37	48	42	37	47	41	36	34
8	61	48	39	33	60	47	39	33	46	38	33	44	38	33	43	37	33	31
9	57	44	36	30	56	43	35	30	42	35	30	41	34	30	40	34	30	28
10	54	40	33	27	52	40	32	27	39	32	27	38	32	27	37	31	27	25

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

	0°	45°	90°
0°	10798	10798	10798
5°	10822	10720	10788
10°	10756	10644	10704
15°	10640	10515	10560
20°	10473	10336	10354
25°	10294	10123	10114
30°	10071	9894	9845
35°	9835	9646	9511
40°	9591	9379	9245
45°	9327	9134	8953
50°	9037	8838	8573
55°	8758	8504	8266
60°	8424	8166	7876
65°	8025	7763	7499
70°	7643	7294	7045
75°	6964	6733	6503
80°	6197	6099	5951
85°	5390	5488	5195

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 9327 cd/sqm



TEST NUMBER: P242774

CATALOG NUMBER: S125DRP-S1090D830-X4F0-XX-UDD-F-W

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	143.4	3.6
10°-20°	405.0	10.2
20°-30°	597.8	15.1
30°-40°	697.5	17.6
40°-50°	700.5	17.7
50°-60°	615.0	15.6
60°-70°	458.1	11.6
70°-80°	261.6	6.6
80°-90°	75.5	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°	1146.2	29.0
0°-40°	1843.7	46.6
0°-60°	3159.2	79.9
0°-90°	3954.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3954.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1519	1519	1519	1519	1519	
5°	1517	1514	1502	1513	1512	144
15°	1446	1442	1429	1435	1435	408
25°	1313	1306	1291	1293	1290	604
35°	1134	1129	1112	1106	1096	709
45°	928	923	909	894	891	715
55°	707	703	686	676	667	631
65°	477	475	462	451	446	473
75°	254	251	245	242	237	270
85°	66	67	67	66	64	77
90°	0	0	0	0	0	



TEST NUMBER: P242774

CATALOG NUMBER: S125DRP-S1090D830-X4F0-XX-UDD-F-W

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1519.3	1519.3	1519.3	1519.3	1519.3
2.5°	1524.1	1520.5	1508.5	1520.5	1519.3
5°	1516.9	1514.5	1502.5	1513.3	1512.1
7.5°	1506.1	1503.7	1490.4	1501.3	1500.1
10°	1490.4	1488.0	1474.8	1484.4	1483.2
12.5°	1471.2	1466.4	1454.4	1461.6	1461.6
15°	1446.0	1442.4	1429.1	1435.2	1435.2
17.5°	1419.5	1413.5	1400.3	1407.5	1401.5
20°	1384.7	1382.3	1366.6	1375.1	1369.0
22.5°	1349.8	1345.0	1330.6	1335.4	1331.8
25°	1312.6	1306.5	1290.9	1293.3	1289.7
27.5°	1269.3	1265.7	1250.1	1251.3	1247.6
30°	1227.2	1223.6	1205.6	1203.2	1199.6
32.5°	1181.5	1175.5	1159.9	1155.1	1147.9
35°	1133.5	1128.7	1111.8	1105.8	1096.2
37.5°	1084.2	1078.2	1062.5	1054.1	1048.1
40°	1033.7	1027.7	1010.9	1000.0	996.4
42.5°	979.6	974.8	958.0	948.4	942.3
45°	927.9	923.1	908.7	894.3	890.7
47.5°	871.4	872.6	854.6	840.2	831.8
50°	817.3	813.7	799.3	783.7	775.3
52.5°	762.1	759.6	744.0	730.8	721.2
55°	706.8	703.2	686.3	675.5	667.1
57.5°	647.9	646.7	632.2	617.8	614.2
60°	592.6	587.8	574.5	562.5	554.1
62.5°	534.9	531.3	520.5	507.2	501.2
65°	477.2	474.8	461.6	450.7	445.9
67.5°	420.7	415.9	406.3	396.7	394.2
70°	367.8	361.8	351.0	343.8	339.0
72.5°	310.1	306.5	300.5	292.1	287.3
75°	253.6	251.2	245.2	241.6	236.8
77.5°	200.7	199.5	195.9	193.5	189.9
80°	151.4	151.4	149.0	147.8	145.4
82.5°	108.2	105.8	105.8	103.4	103.4
85°	66.1	67.3	67.3	66.1	63.7
87.5°	32.5	32.5	31.3	31.3	28.8
90°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P242774  
 CATALOG NUMBER: S125DRP-S1090D830-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	19.62	21.23	19.98	21.55	21.86	19.29	20.91	19.65	21.22	21.54
	3H	21.39	22.85	21.76	23.18	23.54	21.02	22.48	21.40	22.81	23.17
	4H	22.04	23.42	22.44	23.77	24.14	21.67	23.04	22.07	23.39	23.77
	6H	22.52	23.80	22.93	24.16	24.55	22.15	23.43	22.56	23.79	24.18
	8H	22.68	23.89	23.10	24.28	24.68	22.31	23.53	22.74	23.92	24.32
	12H	22.78	23.95	23.21	24.33	24.76	22.42	23.59	22.85	23.97	24.40
4H	2H	20.19	21.57	20.59	21.92	22.30	19.94	21.31	20.33	21.66	22.04
	3H	22.19	23.34	22.60	23.74	24.14	21.89	23.04	22.30	23.44	23.84
	4H	22.98	24.02	23.41	24.43	24.87	22.66	23.71	23.09	24.12	24.56
	6H	23.58	24.50	24.04	24.94	25.39	23.28	24.19	23.73	24.63	25.09
	8H	23.79	24.64	24.25	25.09	25.55	23.49	24.34	23.95	24.78	25.25
	12H	23.94	24.71	24.42	25.18	25.65	23.64	24.41	24.12	24.88	25.35
8H	4H	23.26	24.12	23.72	24.56	25.02	22.99	23.84	23.45	24.28	24.75
	6H	23.99	24.70	24.49	25.19	25.67	23.72	24.43	24.22	24.92	25.40
	8H	24.27	24.91	24.78	25.41	25.90	24.01	24.65	24.52	25.15	25.64
	12H	24.50	25.07	25.01	25.56	26.12	24.24	24.81	24.75	25.30	25.86
12H	4H	23.29	24.06	23.77	24.54	25.01	23.02	23.79	23.50	24.26	24.73
	6H	24.04	24.68	24.55	25.19	25.68	23.79	24.42	24.29	24.93	25.42
	8H	24.38	24.95	24.89	25.44	26.00	24.13	24.69	24.64	25.18	25.74