

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: P242365

Luminaire Tested: S122RDRP-S865D835-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-2024  
Report Number: P242365  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-24)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S122RDRP-S865D835-X4F0-XX-UDD-F-W  
Description: DEFINE 2 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER  
STANDARD LIGHT ENGINE  
Light Source: (92) 3500K CCT, 80 CRI LEDS  
Ballast/Driver: -

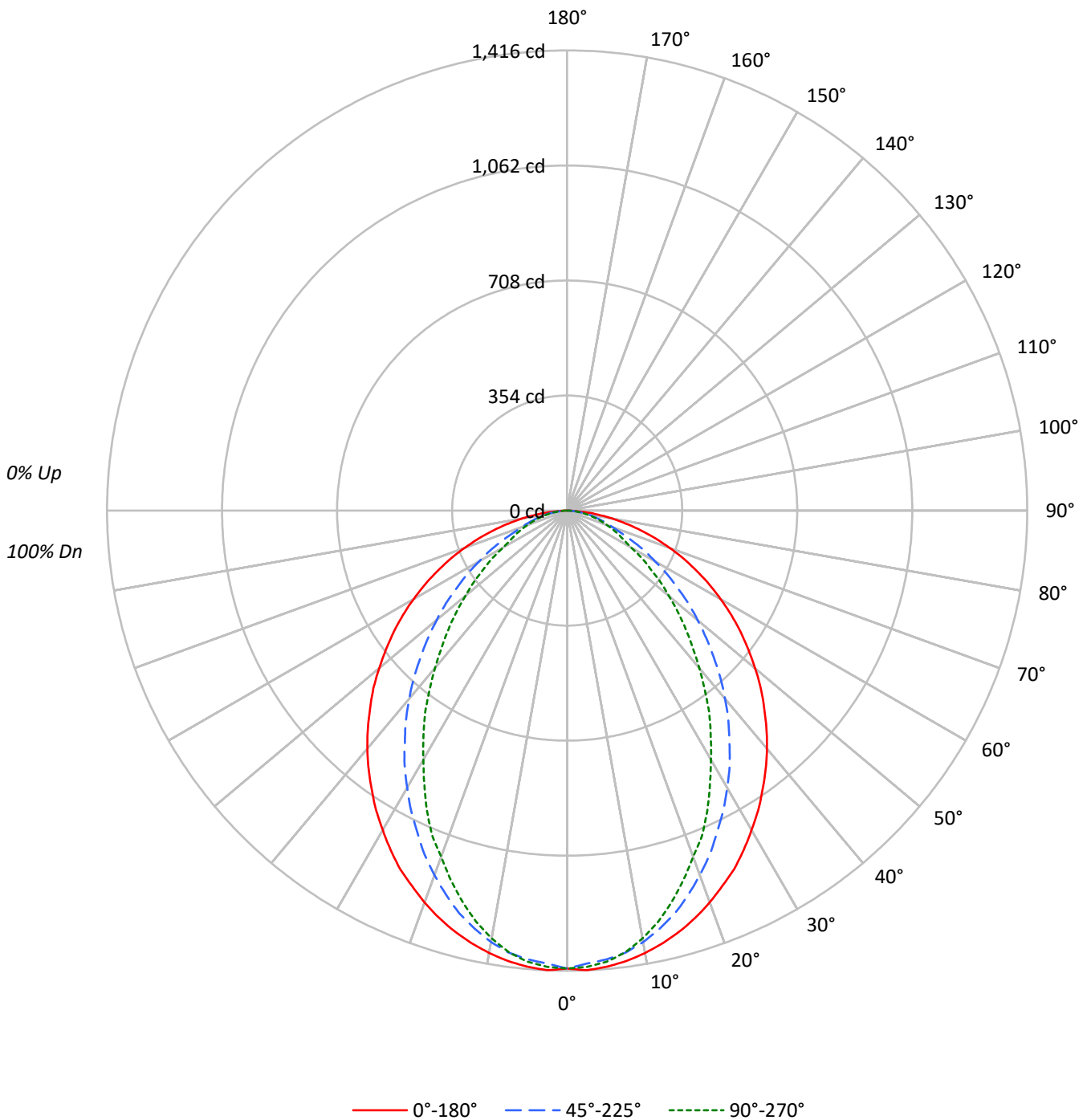
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2898.1 lumens  
Efficiency: N/A  
Efficacy: 83.3 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16  
Luminous Opening: Rectangular (W 0.15' 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: P242365

CATALOG NUMBER: S122RDRP-S865D835-X4F0-XX-UDD-F-W

### Luminous Intensity Polar Plot





TEST NUMBER: P242365

CATALOG NUMBER: S122RDRP-S865D835-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	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	90	82	75	69	79	73	68	76	71	67	74	69	66					64				
4	86	75	66	60	83	73	66	60	71	64	59	69	63	58	66	62	57					55				
5	79	67	59	53	77	66	58	52	64	57	52	62	56	51	60	55	51					49				
6	74	61	53	47	72	60	52	46	58	51	46	57	50	46	55	50	45					43				
7	68	56	47	42	67	55	47	42	53	46	41	52	46	41	51	45	41					39				
8	64	51	43	38	62	51	43	37	49	42	37	48	42	37	47	41	37					35				
9	60	47	39	34	59	47	39	34	46	39	34	44	38	34	44	38	34					32				
10	56	44	36	31	55	43	36	31	42	36	31	41	35	31	41	35	31					29				

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

	0°	45°	90°
0°	26840	26840	26840
5°	26943	26505	26650
10°	26738	26070	25850
15°	26430	25298	24569
20°	26005	24194	22980
25°	25569	22942	21441
30°	24964	21653	19465
35°	24376	20253	17733
40°	23781	18803	15727
45°	23085	17175	13913
50°	22370	15531	12132
55°	21639	13765	10418
60°	20792	11901	8648
65°	19831	10001	7874
70°	18679	8237	7245
75°	17265	7507	6756
80°	15247	6713	6154
85°	11976	5289	5289

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 23085 cd/sqm



TEST NUMBER: P242365

CATALOG NUMBER: S122RDRP-S865D835-X4F0-XX-UDD-F-W

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	132.1	4.6
10°-20°	362.6	12.5
20°-30°	509.0	17.6
30°-40°	554.9	19.1
40°-50°	510.0	17.6
50°-60°	400.5	13.8
60°-70°	260.7	9.0
70°-80°	134.2	4.6
80°-90°	34.3	1.2
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°	1003.6	34.6
0°-40°	1558.5	53.8
0°-60°	2468.9	85.2
0°-90°	2898.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2898.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1409	1409	1409	1409	1409	
5°	1409	1403	1386	1398	1394	134
15°	1340	1326	1283	1259	1246	378
25°	1217	1176	1092	1039	1020	559
35°	1048	983	871	791	763	656
45°	857	772	638	547	516	662
55°	652	552	414	338	314	582
65°	440	337	222	178	175	436
75°	235	145	102	93	92	248
85°	55	28	24	24	24	66
90°	0	0	0	0	0	



TEST NUMBER: P242365

CATALOG NUMBER: S122RDRP-S865D835-X4F0-XX-UDD-F-W

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1409.1	1409.1	1409.1	1409.1	1409.1
2.5°	1415.5	1409.1	1395.1	1407.9	1405.3
5°	1409.1	1402.8	1386.2	1397.7	1393.8
7.5°	1397.7	1390.0	1372.2	1377.3	1370.9
10°	1382.4	1373.4	1347.9	1344.1	1336.5
12.5°	1363.2	1351.8	1317.3	1309.7	1295.6
15°	1340.3	1326.3	1282.9	1258.7	1245.9
17.5°	1313.5	1293.1	1239.5	1211.5	1191.1
20°	1282.9	1257.4	1193.6	1161.7	1133.7
22.5°	1249.7	1220.4	1146.4	1103.1	1084.0
25°	1216.6	1175.8	1091.6	1039.3	1020.2
27.5°	1177.0	1133.7	1040.6	980.7	951.3
30°	1135.0	1086.5	984.5	919.5	885.0
32.5°	1094.2	1035.5	930.9	854.4	822.5
35°	1048.3	983.2	871.0	790.7	762.6
37.5°	1003.6	933.5	814.9	726.9	695.0
40°	956.4	879.9	756.2	665.7	632.5
42.5°	908.0	826.4	697.6	603.2	571.3
45°	857.0	771.5	637.6	547.1	516.5
47.5°	808.5	718.0	580.2	489.7	461.6
50°	754.9	664.4	524.1	436.1	409.4
52.5°	702.7	607.0	470.6	386.4	362.2
55°	651.6	552.2	414.5	337.9	313.7
57.5°	599.4	497.3	364.7	293.3	272.9
60°	545.8	443.8	312.4	247.4	227.0
62.5°	493.5	391.5	267.8	206.6	196.4
65°	440.0	336.7	221.9	178.5	174.7
67.5°	388.9	285.7	178.5	156.9	153.0
70°	335.4	235.9	147.9	135.2	130.1
72.5°	284.4	190.0	123.7	113.5	110.9
75°	234.6	145.4	102.0	93.1	91.8
77.5°	184.9	103.3	80.3	75.2	72.7
80°	139.0	74.0	61.2	56.1	56.1
82.5°	96.9	49.7	42.1	39.5	39.5
85°	54.8	28.1	24.2	24.2	24.2
87.5°	20.4	10.2	10.2	8.9	8.9
90°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P242365  
 CATALOG NUMBER: S122RDRP-S865D835-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	22.66	24.19	23.03	24.50	24.81	18.63	20.15	18.99	20.46	20.77
	3H	24.43	25.80	24.81	26.12	26.48	19.89	21.26	20.27	21.58	21.95
	4H	25.10	26.38	25.50	26.73	27.10	20.39	21.67	20.79	22.02	22.40
	6H	25.59	26.77	26.00	27.13	27.53	20.77	21.96	21.19	22.32	22.71
	8H	25.75	26.88	26.18	27.27	27.67	20.90	22.02	21.32	22.41	22.81
	12H	25.85	26.93	26.28	27.31	27.74	20.98	22.06	21.41	22.44	22.87
4H	2H	22.77	24.05	23.17	24.40	24.78	19.32	20.60	19.72	20.95	21.33
	3H	24.70	25.76	25.11	26.16	26.57	20.76	21.83	21.18	22.23	22.63
	4H	25.45	26.41	25.88	26.82	27.26	21.36	22.32	21.80	22.74	23.17
	6H	26.04	26.88	26.50	27.32	27.78	21.85	22.68	22.31	23.13	23.59
	8H	26.26	27.04	26.72	27.48	27.95	22.01	22.79	22.48	23.23	23.70
	12H	26.41	27.11	26.89	27.58	28.06	22.13	22.83	22.61	23.30	23.77
8H	4H	25.48	26.25	25.94	26.70	27.16	21.72	22.49	22.18	22.94	23.41
	6H	26.11	26.76	26.61	27.25	27.72	22.30	22.95	22.80	23.44	23.91
	8H	26.36	26.94	26.88	27.45	27.94	22.52	23.10	23.04	23.61	24.10
	12H	26.57	27.08	27.08	27.57	28.13	22.70	23.21	23.21	23.71	24.27
12H	4H	25.46	26.16	25.94	26.63	27.10	21.76	22.46	22.24	22.93	23.40
	6H	26.09	26.67	26.61	27.18	27.67	22.37	22.94	22.88	23.45	23.94
	8H	26.38	26.89	26.89	27.38	27.95	22.64	23.15	23.15	23.64	24.21