

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: P242528

Luminaire Tested: S123RDRP-S1000D927-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-2024  
Report Number: P242528  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-25)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123RDRP-S1000D927-X4F0-XX-UDD-F-W  
Description: DEFINE 3 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER  
STANDARD LIGHT ENGINE  
Light Source: (92) 2700K CCT, 90 CRI LEDS  
Ballast/Driver: -

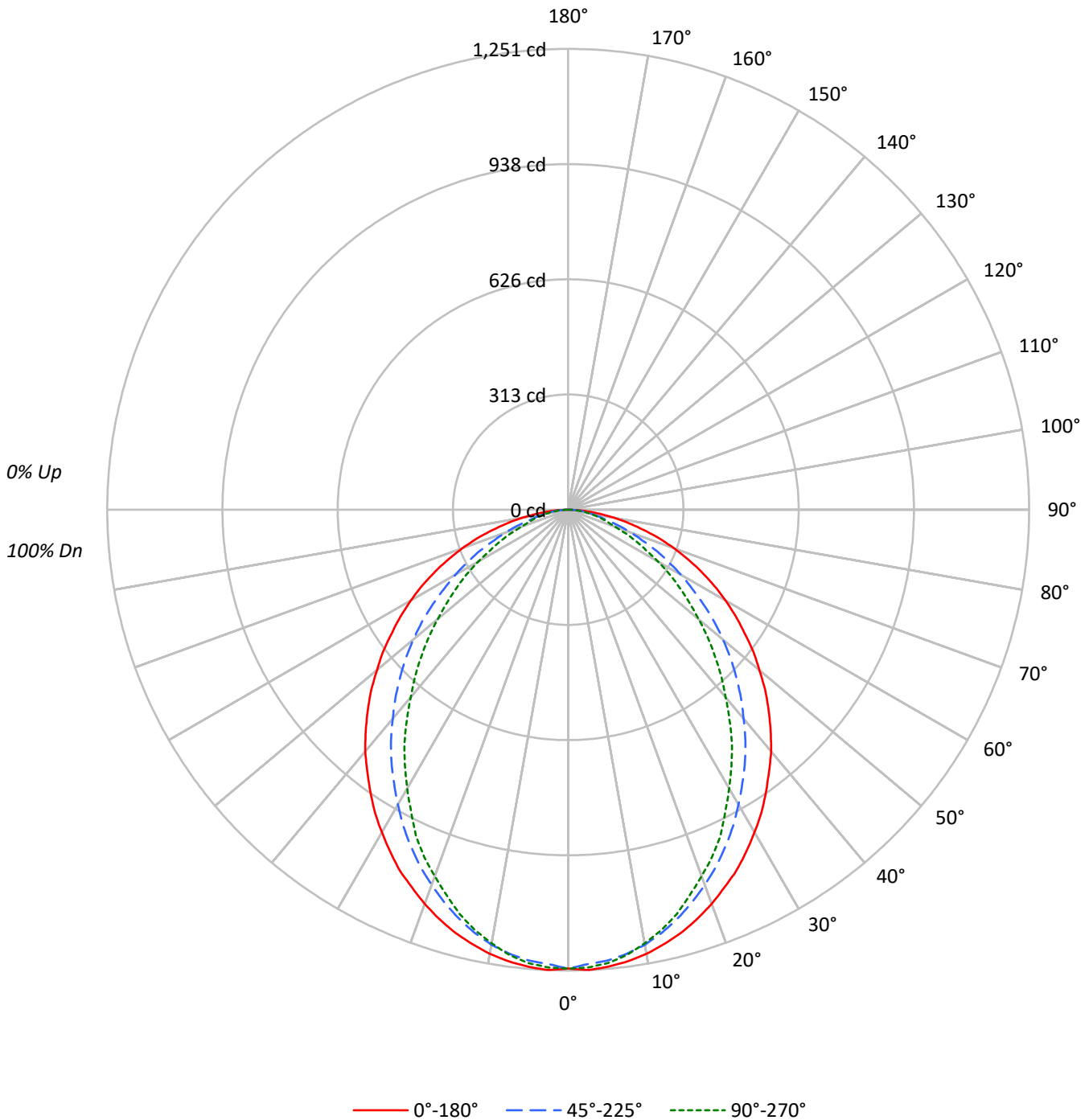
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2814.0 lumens  
Efficiency: N/A  
Efficacy: 80.9 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.07 / 1.22  
Luminous Opening: Rectangular (W 0.23' 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

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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	105	101	98	107	103	99	96	99	96	93	95	93	90	91	89	88	86					86			
2	100	93	86	81	98	91	85	80	87	83	78	84	80	77	81	78	75	73					73			
3	92	82	75	68	90	81	74	68	78	72	67	75	70	66	73	68	64	62					62			
4	85	73	65	59	83	72	64	58	70	63	58	67	62	57	65	60	56	54					54			
5	78	66	57	51	76	65	57	51	63	56	50	61	55	50	59	54	49	47					47			
6	73	60	51	45	71	59	51	45	57	50	45	55	49	44	54	48	44	42					42			
7	67	54	46	40	66	54	46	40	52	45	40	51	44	39	49	44	39	37					37			
8	63	50	42	36	61	49	41	36	48	41	36	47	40	36	46	40	35	34					34			
9	59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32	30					30			
10	55	43	35	30	54	42	35	30	41	34	30	40	34	29	39	34	29	28					28			

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

	0°	45°	90°
0°	15098	15098	15098
5°	15156	14947	15033
10°	15070	14759	14710
15°	14908	14414	14262
20°	14686	13983	13656
25°	14456	13497	13065
30°	14153	12938	12230
35°	13843	12378	11465
40°	13556	11717	10518
45°	13179	11065	9663
50°	12764	10324	8706
55°	12339	9478	7813
60°	11952	8572	6834
65°	11444	7592	5854
70°	10813	6372	4728
75°	9886	5016	4449
80°	8816	4439	4090
85°	7441	3936	3658

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 13179 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	117.1	4.2
10°-20°	325.7	11.6
20°-30°	469.0	16.7
30°-40°	528.2	18.8
40°-50°	505.2	18.0
50°-60°	413.6	14.7
60°-70°	278.8	9.9
70°-80°	139.8	5.0
80°-90°	36.6	1.3
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°	911.8	32.4
0°-40°	1440.0	51.2
0°-60°	2358.8	83.8
0°-90°	2814.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2814.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1246	1246	1246	1246	1246	
5°	1246	1241	1228	1238	1236	118
15°	1188	1177	1149	1144	1136	335
25°	1081	1056	1009	988	977	497
35°	936	899	836	793	775	586
45°	769	723	646	588	564	593
55°	584	534	448	390	370	524
65°	399	344	265	215	204	395
75°	211	163	107	97	95	225
85°	54	31	28	26	26	62
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1245.6	1245.6	1245.6	1245.6	1245.6
2.5°	1250.7	1246.6	1234.5	1245.6	1243.6
5°	1245.6	1240.6	1228.4	1237.5	1235.5
7.5°	1236.5	1231.5	1216.3	1222.4	1219.3
10°	1224.4	1217.3	1199.1	1200.2	1195.1
12.5°	1207.2	1199.1	1175.9	1174.9	1168.8
15°	1188.0	1176.9	1148.6	1143.6	1136.5
17.5°	1164.8	1152.7	1117.3	1107.2	1097.1
20°	1138.5	1122.4	1084.0	1070.8	1058.7
22.5°	1109.2	1090.0	1048.6	1031.4	1020.3
25°	1080.9	1055.7	1009.2	988.0	976.9
27.5°	1046.6	1019.3	968.8	940.5	923.3
30°	1011.2	980.9	924.4	890.0	873.8
32.5°	975.9	940.5	879.9	841.5	824.3
35°	935.5	899.1	836.5	793.0	774.8
37.5°	895.1	855.7	790.0	741.5	719.3
40°	856.7	812.2	740.5	688.0	664.7
42.5°	813.2	768.8	694.0	635.4	615.2
45°	768.8	723.3	645.5	588.0	563.7
47.5°	725.3	674.8	598.1	535.4	514.2
50°	676.9	629.4	547.5	484.9	461.7
52.5°	633.4	580.9	500.1	434.4	414.2
55°	583.9	534.4	448.5	389.9	369.7
57.5°	539.5	485.9	399.0	343.5	326.3
60°	493.0	437.4	353.6	299.0	281.9
62.5°	446.5	391.0	307.1	256.6	238.4
65°	399.0	343.5	264.7	215.2	204.1
67.5°	351.6	295.0	218.2	180.8	168.7
70°	305.1	250.5	179.8	144.5	133.4
72.5°	258.6	205.1	142.4	115.2	112.1
75°	211.1	162.6	107.1	97.0	95.0
77.5°	167.7	123.2	83.8	77.8	75.8
80°	126.3	84.9	63.6	60.6	58.6
82.5°	86.9	52.5	45.5	42.4	42.4
85°	53.5	31.3	28.3	26.3	26.3
87.5°	24.2	13.1	13.1	12.1	11.1
90°	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	20.88	22.43	21.24	22.75	23.06	18.25	19.81	18.62	20.12	20.43
	3H	22.66	24.05	23.03	24.38	24.74	19.36	20.76	19.74	21.09	21.45
	4H	23.32	24.63	23.72	24.98	25.35	19.76	21.07	20.16	21.42	21.80
	6H	23.80	25.01	24.21	25.38	25.77	20.08	21.29	20.49	21.66	22.05
	8H	23.95	25.11	24.37	25.49	25.90	20.19	21.34	20.61	21.73	22.13
	12H	24.05	25.16	24.48	25.54	25.97	20.26	21.37	20.69	21.75	22.18
4H	2H	21.14	22.45	21.54	22.80	23.18	18.96	20.28	19.36	20.63	21.00
	3H	23.10	24.19	23.51	24.59	24.99	20.24	21.33	20.65	21.73	22.13
	4H	23.87	24.85	24.30	25.27	25.71	20.72	21.70	21.15	22.12	22.56
	6H	24.47	25.32	24.92	25.77	26.22	21.14	22.00	21.60	22.44	22.90
	8H	24.66	25.46	25.12	25.90	26.37	21.29	22.09	21.75	22.53	23.00
	12H	24.81	25.52	25.29	26.00	26.47	21.40	22.11	21.88	22.59	23.06
8H	4H	23.93	24.73	24.39	25.17	25.64	21.04	21.84	21.51	22.29	22.75
	6H	24.59	25.25	25.08	25.74	26.22	21.56	22.22	22.05	22.71	23.18
	8H	24.82	25.42	25.33	25.92	26.41	21.76	22.35	22.27	22.86	23.35
	12H	25.02	25.55	25.53	26.04	26.60	21.93	22.46	22.44	22.95	23.51
12H	4H	23.92	24.63	24.40	25.11	25.58	21.09	21.80	21.57	22.28	22.75
	6H	24.58	25.17	25.09	25.68	26.17	21.62	22.21	22.13	22.72	23.21
	8H	24.85	25.37	25.36	25.86	26.43	21.87	22.40	22.38	22.89	23.45