

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: P243561

Luminaire Tested: S124RDRP-H1195D927-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-2024  
Report Number: P243561  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-65)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124RDRP-H1195D927-X4F0-XX-UDD-F-W  
Description: DEFINE 4 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: (184) 2700K CCT, 90 CRI LEDS  
Ballast/Driver: -

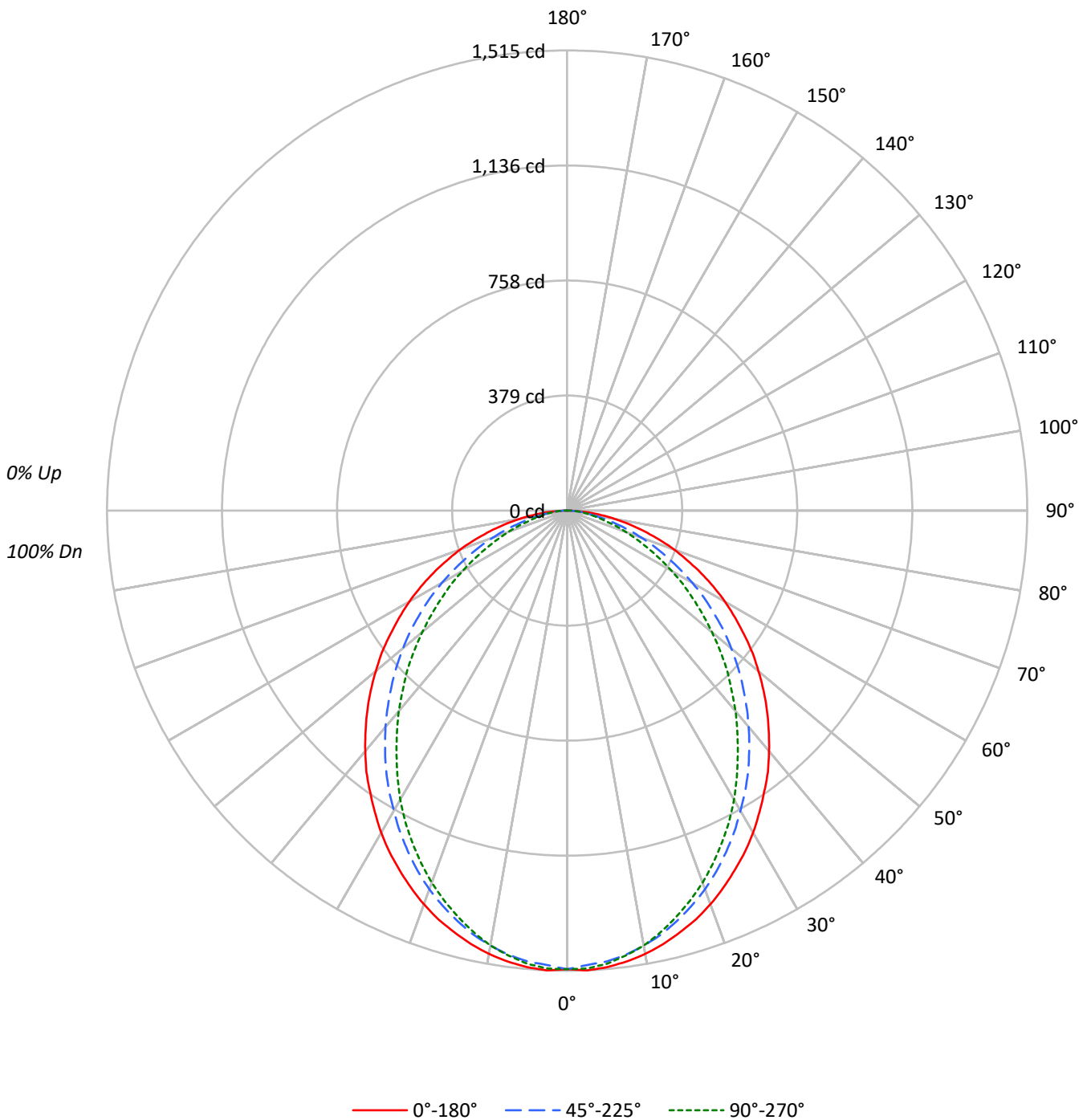
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3560.4 lumens  
Efficiency: N/A  
Efficacy: 94.4 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.1 / 1.25  
Luminous Opening: Rectangular (W 0.31' x L: 3.88' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 37.7  
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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102
1	109	105	101	97	107	103	99	96	98	95	93	95	92	90	91	89	87
2	100	92	86	80	97	90	84	79	87	82	78	84	79	76	81	77	74
3	92	82	74	68	89	80	73	67	77	71	66	74	69	65	72	67	64
4	84	73	64	58	82	71	64	57	69	62	57	67	61	56	64	59	55
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48
6	72	59	50	44	70	58	50	44	56	49	44	55	48	43	53	47	43
7	67	54	45	39	65	53	45	39	51	44	39	50	43	39	49	43	38
8	62	49	41	35	61	49	41	35	47	40	35	46	39	35	45	39	34
9	58	45	37	32	57	45	37	32	44	37	32	42	36	31	41	36	31
10	55	42	34	29	54	41	34	29	40	34	29	39	33	29	39	33	29

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

	0°	45°	90°
0°	13421	13421	13421
5°	13463	13293	13363
10°	13377	13126	13126
15°	13228	12869	12746
20°	13049	12554	12332
25°	12809	12153	11825
30°	12569	11711	11277
35°	12273	11281	10629
40°	11999	10796	10008
45°	11696	10282	9356
50°	11373	9753	8599
55°	11017	9153	7840
60°	10677	8459	7052
65°	10218	7641	6165
70°	9730	6747	5356
75°	8995	5626	4362
80°	8216	4392	3993
85°	7272	4202	3978

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 11696 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	142.0	4.0
10°-20°	396.5	11.1
20°-30°	575.0	16.2
30°-40°	655.4	18.4
40°-50°	637.7	17.9
50°-60°	535.7	15.0
60°-70°	373.2	10.5
70°-80°	192.7	5.4
80°-90°	52.1	1.5
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°	1113.6	31.3
0°-40°	1769.0	49.7
0°-60°	2942.4	82.6
0°-90°	3560.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3560.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1510	1510	1510	1510	1510	
5°	1509	1504	1490	1501	1498	143
15°	1437	1426	1398	1396	1385	405
25°	1306	1281	1239	1221	1206	602
35°	1131	1096	1040	1001	980	708
45°	930	886	818	766	744	718
55°	711	665	591	530	506	637
65°	486	439	363	311	293	481
75°	262	222	164	137	127	279
85°	71	46	41	39	39	82
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1509.9	1509.9	1509.9	1509.9	1509.9
2.5°	1515.4	1511.0	1497.6	1509.9	1508.8
5°	1508.8	1504.3	1489.8	1501.0	1497.6
7.5°	1497.6	1492.0	1475.3	1483.1	1477.6
10°	1482.0	1476.4	1454.2	1459.7	1454.2
12.5°	1462.0	1454.2	1429.6	1430.8	1421.8
15°	1437.4	1426.3	1398.4	1396.2	1385.1
17.5°	1410.7	1396.2	1363.9	1358.3	1346.1
20°	1379.5	1361.7	1327.1	1314.9	1303.7
22.5°	1343.8	1322.7	1284.8	1270.3	1255.8
25°	1306.0	1281.4	1239.1	1221.3	1205.7
27.5°	1267.0	1238.0	1192.3	1170.0	1154.4
30°	1224.6	1191.2	1141.0	1115.4	1098.7
32.5°	1177.8	1144.4	1092.0	1060.8	1039.6
35°	1131.0	1096.5	1039.6	1000.6	979.5
37.5°	1085.3	1046.3	985.0	944.9	920.4
40°	1034.1	992.8	930.4	884.8	862.5
42.5°	982.8	940.5	873.6	825.7	801.2
45°	930.4	885.9	817.9	765.5	744.3
47.5°	877.0	832.4	762.2	707.6	683.1
50°	822.4	777.8	705.3	645.2	621.8
52.5°	768.9	722.1	649.6	588.3	563.8
55°	710.9	665.2	590.6	530.4	505.9
57.5°	655.2	607.3	534.9	473.6	453.5
60°	600.6	552.7	475.8	416.7	396.7
62.5°	542.7	494.7	419.0	362.1	344.3
65°	485.8	439.0	363.3	310.9	293.1
67.5°	427.9	385.5	312.0	261.9	247.4
70°	374.4	326.5	259.6	216.2	206.1
72.5°	317.6	275.2	210.6	174.9	167.1
75°	261.9	221.7	163.8	137.1	127.0
77.5°	210.6	171.6	123.7	101.4	101.4
80°	160.5	125.9	85.8	80.2	78.0
82.5°	113.7	81.3	63.5	59.1	57.9
85°	71.3	45.7	41.2	39.0	39.0
87.5°	34.5	21.2	21.2	20.1	20.1
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	20.47	22.05	20.84	22.36	22.68	18.58	20.15	18.94	20.47	20.78
	3H	22.29	23.71	22.67	24.03	24.40	19.84	21.26	20.22	21.59	21.95
	4H	22.97	24.31	23.37	24.65	25.03	20.24	21.57	20.63	21.92	22.29
	6H	23.49	24.72	23.90	25.09	25.48	20.51	21.75	20.93	22.11	22.50
	8H	23.66	24.83	24.08	25.22	25.62	20.61	21.79	21.04	22.18	22.58
	12H	23.78	24.90	24.21	25.28	25.71	20.69	21.82	21.12	22.20	22.63
4H	2H	20.83	22.16	21.22	22.51	22.88	19.28	20.61	19.68	20.96	21.34
	3H	22.84	23.96	23.25	24.35	24.75	20.73	21.84	21.14	22.24	22.64
	4H	23.65	24.66	24.09	25.07	25.51	21.21	22.21	21.64	22.63	23.06
	6H	24.30	25.17	24.75	25.61	26.07	21.57	22.45	22.03	22.89	23.35
	8H	24.51	25.33	24.97	25.77	26.24	21.71	22.53	22.17	22.97	23.44
	12H	24.68	25.41	25.16	25.89	26.36	21.83	22.56	22.31	23.04	23.51
8H	4H	23.76	24.58	24.22	25.02	25.49	21.54	22.36	22.00	22.80	23.27
	6H	24.48	25.16	24.98	25.65	26.13	21.99	22.67	22.49	23.16	23.63
	8H	24.76	25.37	25.27	25.87	26.36	22.19	22.79	22.70	23.30	23.79
	12H	24.99	25.52	25.49	26.01	26.58	22.37	22.91	22.88	23.40	23.96
12H	4H	23.75	24.48	24.23	24.96	25.43	21.59	22.32	22.07	22.79	23.26
	6H	24.48	25.09	24.99	25.59	26.08	22.05	22.66	22.57	23.17	23.66
	8H	24.79	25.33	25.30	25.82	26.38	22.30	22.84	22.81	23.33	23.89