

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: P1055591

Luminaire Tested: S123R3DR-S1165D930-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055591
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-6)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123R3DR-S1165D930-X4F0-XX-UDD-F-S
Description: DEFINE 3, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

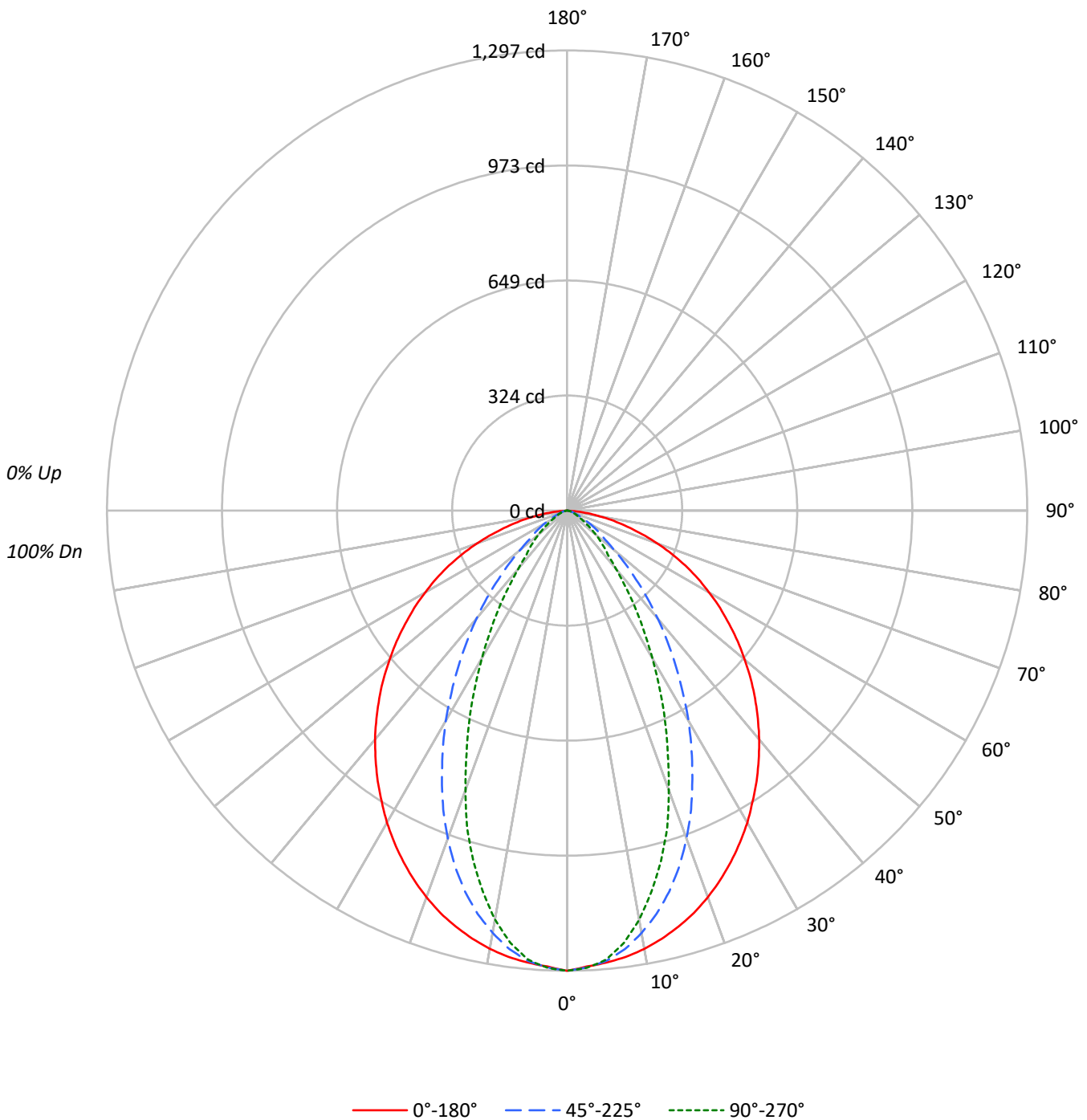
Lumens per Lamp: N/A
Luminaire Lumens: 1804.0 lumens
Efficiency: N/A
Efficacy: 43.1 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 0.77 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 41.9
Input Voltage (V): 120
Input Current (A_{in}): 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	111	108	104	102	109	106	103	100	101	99	97	98	96	94	94	93	91					89				
2	104	97	92	87	101	95	90	86	92	88	84	89	85	82	86	83	81					79				
3	96	88	81	76	94	86	80	76	84	78	74	81	77	73	79	75	72					70				
4	90	80	73	67	88	79	72	67	76	71	66	74	69	65	72	68	64					62				
5	84	73	66	60	82	72	65	60	70	64	59	68	63	59	67	62	58					56				
6	78	67	60	54	77	66	59	54	65	58	53	63	57	53	62	57	53					51				
7	73	62	54	49	72	61	54	49	60	53	49	58	53	48	57	52	48					46				
8	69	57	50	45	68	57	50	45	56	49	45	54	49	44	53	48	44					42				
9	65	53	46	41	64	53	46	41	52	45	41	51	45	41	50	45	41					39				
10	62	50	43	38	60	49	43	38	48	42	38	48	42	38	47	42	38					36				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	15640	15640	15640
5°	15477	15417	15373
10°	15354	14797	14331
15°	15148	13875	12754
20°	14877	12621	10744
25°	14525	11106	8669
30°	14139	9518	6675
35°	13700	7854	4941
40°	13257	6251	3366
45°	12767	4675	2537
50°	12246	3252	1983
55°	11708	2377	1448
60°	11147	1780	1037
65°	10487	1192	807
70°	9493	867	649
75°	8189	629	517
80°	6575	514	424
85°	3403	512	346

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 12767 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	119.9	6.6
10°-20°	312.1	17.3
20°-30°	392.2	21.7
30°-40°	365.3	20.2
40°-50°	279.6	15.5
50°-60°	185.9	10.3
60°-70°	100.2	5.6
70°-80°	41.0	2.3
80°-90°	7.8	0.4
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°	824.2	45.7
0°-40°	1189.5	65.9
0°-60°	1655.0	91.7
0°-90°	1804.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1804.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1297	1297	1297	1297	1297	
5°	1279	1292	1274	1269	1270	121
15°	1214	1194	1112	1046	1022	342
25°	1092	1018	835	696	652	503
35°	931	793	534	378	336	582
45°	749	553	274	161	149	578
55°	557	322	113	79	69	499
65°	368	124	42	31	28	363
75°	176	30	14	12	11	188
85°	25	4	4	4	2	36
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1297.2	1297.2	1297.2	1297.2	1297.2
2.5°	1286.2	1302.1	1288.6	1289.8	1289.8
5°	1278.8	1292.3	1273.9	1268.9	1270.2
7.5°	1268.9	1277.5	1246.8	1230.8	1228.4
10°	1254.2	1256.6	1208.7	1180.4	1170.6
12.5°	1235.7	1227.1	1164.4	1117.7	1099.3
15°	1213.6	1193.9	1111.6	1046.4	1021.8
17.5°	1189.0	1155.8	1051.3	966.5	936.9
20°	1159.5	1112.8	983.7	877.9	837.4
22.5°	1127.5	1067.3	912.4	786.9	741.4
25°	1091.9	1018.1	834.9	695.9	651.7
27.5°	1055.0	965.2	758.7	609.9	564.4
30°	1015.6	911.1	683.7	526.3	479.5
32.5°	972.6	852.1	606.2	448.8	402.1
35°	930.8	793.1	533.6	377.5	335.7
37.5°	886.5	734.1	463.6	314.8	268.1
40°	842.3	673.8	397.2	253.3	213.9
42.5°	795.5	613.6	334.4	201.7	170.9
45°	748.8	553.3	274.2	161.1	148.8
47.5°	702.1	493.1	221.3	138.9	126.6
50°	652.9	435.3	173.4	118.0	105.7
52.5°	606.2	377.5	135.3	97.1	86.1
55°	557.0	322.2	113.1	78.7	68.9
57.5°	511.5	265.6	93.4	61.5	54.1
60°	462.3	215.2	73.8	48.0	43.0
62.5°	415.6	168.5	56.6	38.1	34.4
65°	367.6	124.2	41.8	30.7	28.3
67.5°	319.7	89.8	32.0	24.6	23.4
70°	269.3	67.6	24.6	19.7	18.4
72.5°	221.3	48.0	18.4	16.0	14.8
75°	175.8	29.5	13.5	12.3	11.1
77.5°	135.3	17.2	9.8	9.8	8.6
80°	94.7	9.8	7.4	7.4	6.1
82.5°	57.8	6.1	4.9	4.9	4.9
85°	24.6	3.7	3.7	3.7	2.5
87.5°	3.7	1.2	1.2	1.2	1.2
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	19.37	20.72	19.73	21.04	21.35	7.94	9.30	8.31	9.61	9.93
	3H	21.12	22.33	21.50	22.66	23.02	8.61	9.81	8.98	10.14	10.50
	4H	21.82	22.94	22.22	23.29	23.68	8.80	9.93	9.21	10.28	10.66
	6H	22.33	23.37	22.75	23.74	24.13	8.92	9.96	9.34	10.33	10.72
	8H	22.47	23.45	22.90	23.84	24.25	8.96	9.94	9.39	10.33	10.73
	12H	22.52	23.46	22.96	23.84	24.27	8.97	9.90	9.40	10.29	10.72
4H	2H	19.18	20.30	19.58	20.65	21.03	8.50	9.62	8.90	9.97	10.35
	3H	20.97	21.89	21.38	22.29	22.69	9.30	10.22	9.71	10.62	11.02
	4H	21.66	22.49	22.10	22.90	23.35	9.56	10.38	9.99	10.80	11.24
	6H	22.23	22.94	22.69	23.39	23.85	9.75	10.46	10.21	10.91	11.37
	8H	22.41	23.07	22.88	23.52	23.99	9.80	10.47	10.27	10.91	11.38
	12H	22.49	23.08	22.98	23.56	24.04	9.84	10.42	10.32	10.91	11.38
8H	4H	21.54	22.20	22.01	22.65	23.12	9.87	10.53	10.34	10.98	11.45
	6H	22.09	22.63	22.59	23.13	23.61	10.12	10.66	10.62	11.15	11.63
	8H	22.27	22.75	22.79	23.27	23.76	10.20	10.69	10.72	11.20	11.69
	12H	22.37	22.80	22.89	23.30	23.87	10.28	10.71	10.80	11.21	11.78
12H	4H	21.50	22.08	21.98	22.56	23.04	9.91	10.50	10.40	10.98	11.46
	6H	22.03	22.52	22.56	23.04	23.53	10.16	10.65	10.68	11.16	11.65
	8H	22.23	22.66	22.74	23.15	23.72	10.29	10.71	10.80	11.21	11.78