

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: P1055588

Luminaire Tested: S123R3DR-S1165D927-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055588
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-S1165D927-X4F0-XX-UDD-F-S
Description: DEFINE 3, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

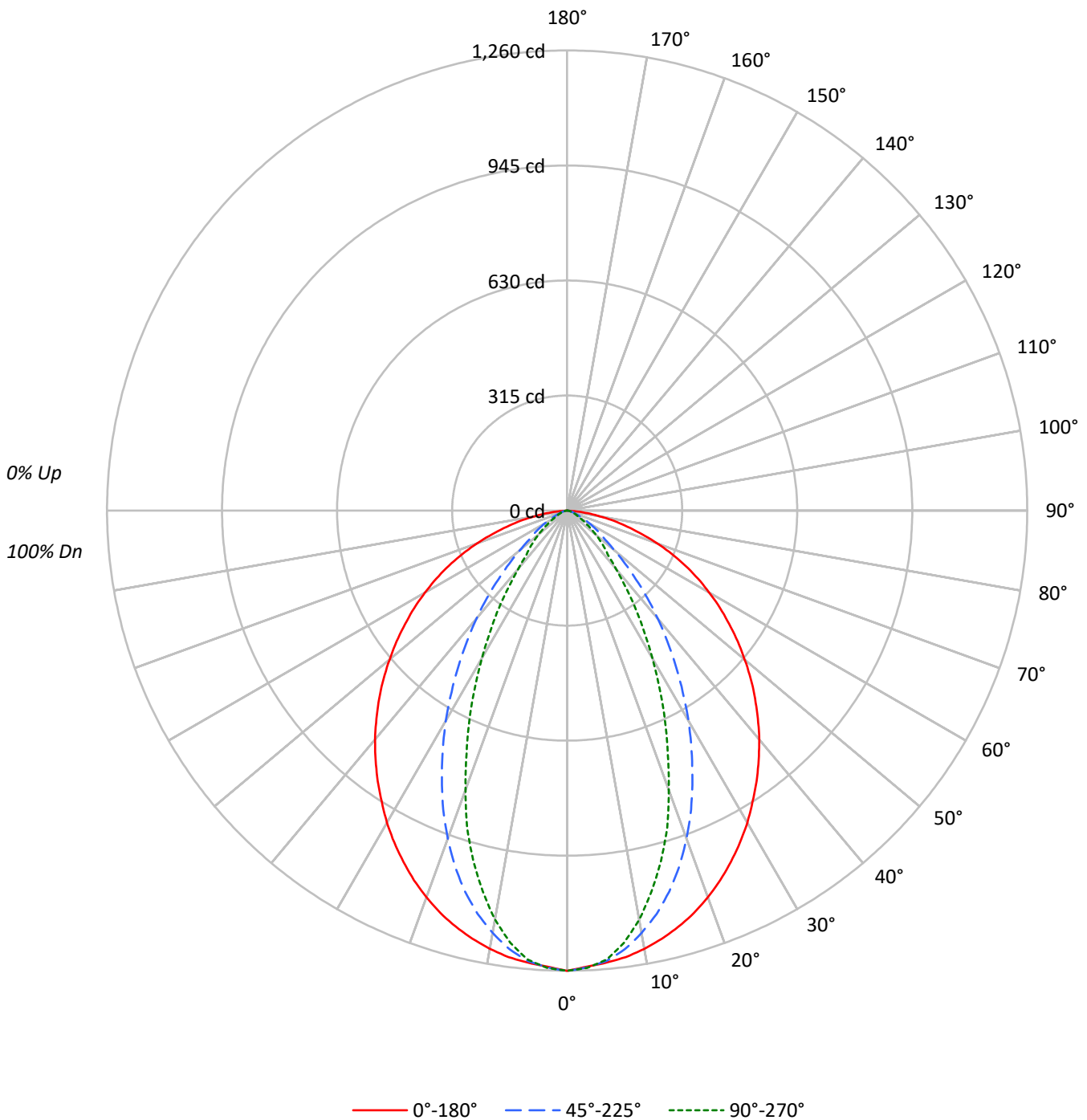
Lumens per Lamp: N/A
Luminaire Lumens: 1752.9 lumens
Efficiency: N/A
Efficacy: 41.8 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 0.77 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 41.9
Input Voltage (V): 120
Input Current (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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	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	61	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°	15196	15196	15196
5°	15037	14979	14937
10°	14919	14377	13925
15°	14718	13480	12392
20°	14454	12263	10439
25°	14113	10791	8423
30°	13738	9248	6486
35°	13311	7631	4801
40°	12880	6073	3272
45°	12406	4542	2465
50°	11899	3160	1926
55°	11376	2310	1406
60°	10831	1729	1008
65°	10190	1158	785
70°	9222	842	631
75°	7956	610	503
80°	6388	500	417
85°	3306	498	332

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 12406 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	116.5	6.6
10°-20°	303.3	17.3
20°-30°	381.0	21.7
30°-40°	354.9	20.2
40°-50°	271.7	15.5
50°-60°	180.6	10.3
60°-70°	97.3	5.6
70°-80°	39.9	2.3
80°-90°	7.6	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°	800.8	45.7
0°-40°	1155.8	65.9
0°-60°	1608.0	91.7
0°-90°	1752.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1752.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1260	1260	1260	1260	1260	
5°	1242	1256	1238	1233	1234	118
15°	1179	1160	1080	1017	993	332
25°	1061	989	811	676	633	489
35°	904	771	518	367	326	565
45°	728	538	266	156	145	561
55°	541	313	110	76	67	485
65°	357	121	41	30	28	353
75°	171	29	13	12	11	183
85°	24	4	4	4	2	35
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1260.4	1260.4	1260.4	1260.4	1260.4
2.5°	1249.7	1265.2	1252.1	1253.3	1253.3
5°	1242.5	1255.7	1237.7	1233.0	1234.2
7.5°	1233.0	1241.3	1211.5	1195.9	1193.5
10°	1218.6	1221.0	1174.4	1146.9	1137.4
12.5°	1200.7	1192.3	1131.4	1086.0	1068.1
15°	1179.2	1160.1	1080.0	1016.7	992.8
17.5°	1155.3	1123.0	1021.5	939.1	910.4
20°	1126.6	1081.2	955.8	853.0	813.6
22.5°	1095.6	1037.0	886.5	764.6	720.4
25°	1060.9	989.2	811.2	676.2	633.2
27.5°	1025.1	937.9	737.1	592.6	548.4
30°	986.8	885.3	664.3	511.3	465.9
32.5°	945.0	827.9	589.0	436.1	390.7
35°	904.4	770.6	518.5	366.8	326.2
37.5°	861.4	713.3	450.4	305.9	260.5
40°	818.4	654.7	385.9	246.1	207.9
42.5°	773.0	596.2	325.0	195.9	166.1
45°	727.6	537.6	266.4	156.5	144.6
47.5°	682.2	479.1	215.1	135.0	123.1
50°	634.4	422.9	168.5	114.7	102.7
52.5°	589.0	366.8	131.4	94.4	83.6
55°	541.2	313.0	109.9	76.5	66.9
57.5°	497.0	258.1	90.8	59.7	52.6
60°	449.2	209.1	71.7	46.6	41.8
62.5°	403.8	163.7	55.0	37.0	33.5
65°	357.2	120.7	40.6	29.9	27.5
67.5°	310.6	87.2	31.1	23.9	22.7
70°	261.6	65.7	23.9	19.1	17.9
72.5°	215.1	46.6	17.9	15.5	14.3
75°	170.8	28.7	13.1	11.9	10.8
77.5°	131.4	16.7	9.6	9.6	8.4
80°	92.0	9.6	7.2	7.2	6.0
82.5°	56.2	6.0	4.8	4.8	4.8
85°	23.9	3.6	3.6	3.6	2.4
87.5°	3.6	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	19.27	20.62	19.63	20.94	21.25	7.84	9.19	8.20	9.51	9.82
	3H	21.02	22.23	21.40	22.55	22.92	8.50	9.71	8.88	10.04	10.40
	4H	21.72	22.84	22.12	23.19	23.58	8.70	9.82	9.10	10.17	10.55
	6H	22.23	23.27	22.65	23.64	24.03	8.82	9.85	9.23	10.22	10.62
	8H	22.37	23.35	22.80	23.74	24.15	8.86	9.84	9.29	10.23	10.63
	12H	22.42	23.36	22.86	23.74	24.17	8.87	9.80	9.30	10.19	10.62
4H	2H	19.08	20.20	19.48	20.55	20.93	8.39	9.52	8.80	9.87	10.25
	3H	20.87	21.79	21.28	22.19	22.59	9.19	10.11	9.61	10.52	10.92
	4H	21.56	22.39	22.00	22.80	23.25	9.45	10.27	9.88	10.69	11.13
	6H	22.13	22.84	22.59	23.29	23.75	9.65	10.36	10.11	10.81	11.27
	8H	22.31	22.97	22.78	23.42	23.89	9.70	10.37	10.17	10.81	11.28
	12H	22.39	22.98	22.88	23.46	23.94	9.74	10.32	10.22	10.81	11.28
8H	4H	21.44	22.10	21.91	22.55	23.02	9.76	10.43	10.23	10.87	11.34
	6H	21.99	22.53	22.49	23.03	23.51	10.02	10.56	10.52	11.05	11.53
	8H	22.17	22.65	22.69	23.17	23.66	10.10	10.59	10.63	11.10	11.60
	12H	22.27	22.70	22.79	23.20	23.77	10.19	10.61	10.70	11.11	11.68
12H	4H	21.40	21.98	21.88	22.46	22.94	9.81	10.40	10.29	10.88	11.35
	6H	21.93	22.42	22.46	22.94	23.43	10.06	10.55	10.58	11.06	11.55
	8H	22.13	22.56	22.64	23.05	23.62	10.19	10.62	10.70	11.11	11.68