

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: P1055594

Luminaire Tested: S123R3DR-S1165D935-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055594
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-S1165D935-X4F0-XX-UDD-F-S
Description: DEFINE 3, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

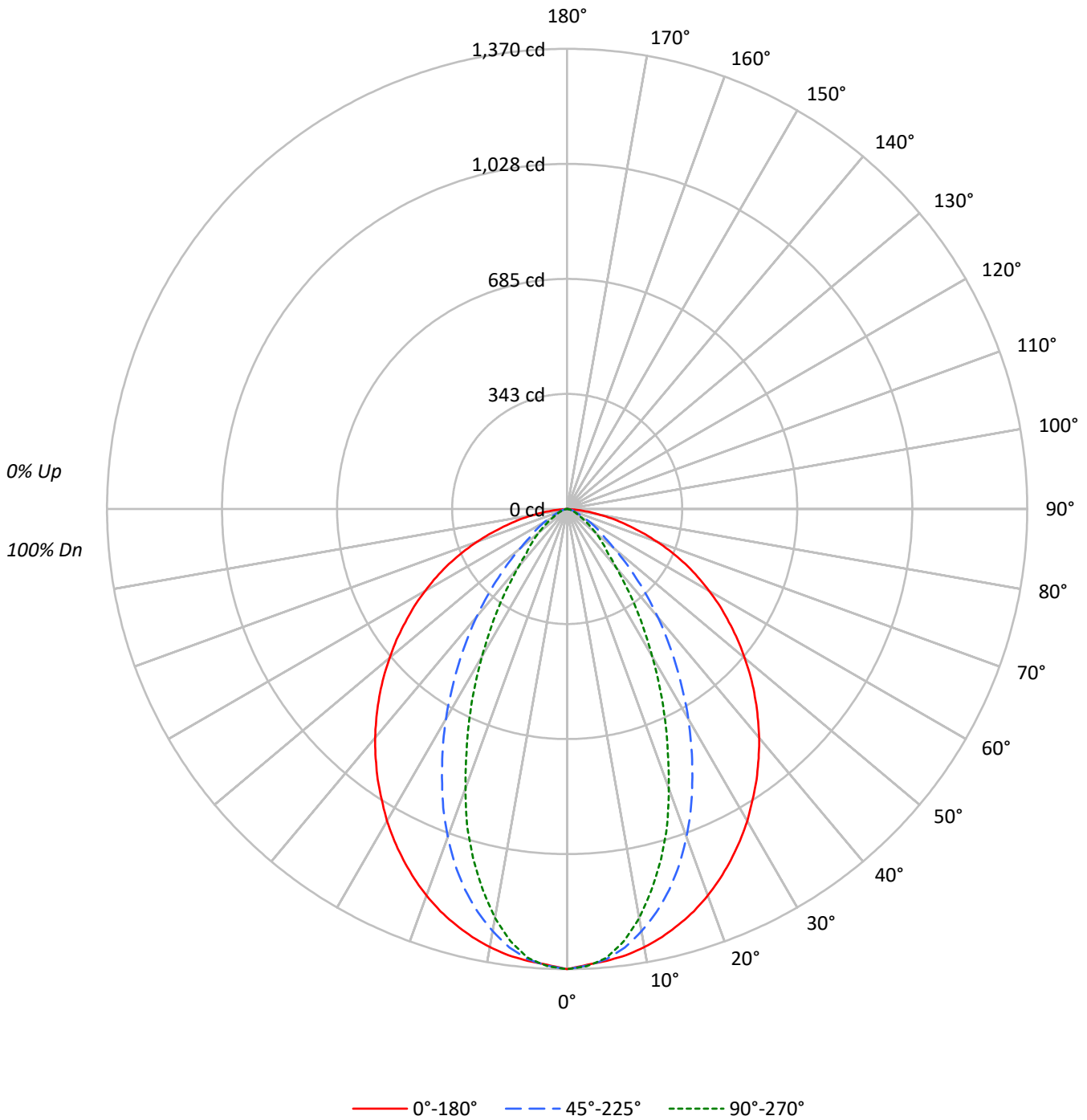
Lumens per Lamp: N/A
Luminaire Lumens: 1905.2 lumens
Efficiency: N/A
Efficacy: 45.5 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 0.77 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

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	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					89			
2	104	97	92	87	101	95	90	86	92	88	84	89	85	82	86	83	81	79					79			
3	96	88	81	76	94	86	80	76	84	78	74	81	77	73	79	75	72	70					70			
4	90	80	73	67	88	79	72	67	76	71	66	74	69	65	72	68	64	62					62			
5	84	73	66	60	82	72	65	60	70	64	59	68	63	59	67	62	58	56					56			
6	78	67	60	54	77	66	59	54	65	58	53	63	57	53	62	57	53	51					51			
7	73	62	54	49	72	61	54	49	60	53	49	58	53	48	57	52	48	46					46			
8	69	57	50	45	68	57	50	45	56	49	45	54	49	44	53	48	44	42					42			
9	65	53	46	41	64	53	46	41	52	45	41	51	45	41	50	45	41	39					39			
10	62	50	43	38	60	49	43	38	48	42	38	48	42	38	47	42	38	36					36			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	16516	16516	16516
5°	16344	16281	16234
10°	16215	15626	15134
15°	15997	14652	13469
20°	15711	13328	11346
25°	15339	11729	9155
30°	14932	10051	7050
35°	14468	8295	5218
40°	13999	6601	3555
45°	13483	4938	2679
50°	12933	3434	2095
55°	12364	2512	1528
60°	11772	1878	1095
65°	11077	1258	853
70°	10025	917	687
75°	8650	666	545
80°	6943	542	451
85°	3597	539	360

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 13483 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	126.6	6.6
10°-20°	329.6	17.3
20°-30°	414.2	21.7
30°-40°	385.7	20.2
40°-50°	295.3	15.5
50°-60°	196.3	10.3
60°-70°	105.8	5.6
70°-80°	43.4	2.3
80°-90°	8.3	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°	870.4	45.7
0°-40°	1256.2	65.9
0°-60°	1747.7	91.7
0°-90°	1905.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1905.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1370	1370	1370	1370	1370	
5°	1350	1365	1345	1340	1341	128
15°	1282	1261	1174	1105	1079	361
25°	1153	1075	882	735	688	531
35°	983	838	564	399	354	615
45°	791	584	290	170	157	610
55°	588	340	120	83	73	527
65°	388	131	44	32	30	384
75°	186	31	14	13	12	199
85°	26	4	4	4	3	38
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1369.9	1369.9	1369.9	1369.9	1369.9
2.5°	1358.2	1375.1	1360.8	1362.1	1362.1
5°	1350.5	1364.7	1345.3	1340.1	1341.4
7.5°	1340.1	1349.2	1316.7	1299.8	1297.2
10°	1324.5	1327.1	1276.4	1246.6	1236.2
12.5°	1305.0	1295.9	1229.7	1180.3	1160.9
15°	1281.6	1260.9	1173.9	1105.0	1079.1
17.5°	1255.7	1220.6	1110.2	1020.6	989.5
20°	1224.5	1175.2	1038.8	927.1	884.3
22.5°	1190.7	1127.1	963.5	831.0	783.0
25°	1153.1	1075.2	881.7	735.0	688.2
27.5°	1114.1	1019.3	801.2	644.1	596.0
30°	1072.6	962.2	722.0	555.8	506.4
32.5°	1027.1	899.9	640.2	474.0	424.6
35°	983.0	837.5	563.6	398.6	354.5
37.5°	936.2	775.2	489.5	332.4	283.1
40°	889.5	711.6	419.4	267.5	225.9
42.5°	840.1	648.0	353.2	213.0	180.5
45°	790.8	584.3	289.6	170.1	157.1
47.5°	741.5	520.7	233.7	146.7	133.7
50°	689.5	459.7	183.1	124.7	111.7
52.5°	640.2	398.6	142.8	102.6	90.9
55°	588.2	340.2	119.5	83.1	72.7
57.5°	540.2	280.5	98.7	64.9	57.1
60°	488.2	227.2	77.9	50.6	45.4
62.5°	438.9	177.9	59.7	40.3	36.4
65°	388.3	131.1	44.1	32.5	29.9
67.5°	337.6	94.8	33.8	26.0	24.7
70°	284.4	71.4	26.0	20.8	19.5
72.5°	233.7	50.6	19.5	16.9	15.6
75°	185.7	31.2	14.3	13.0	11.7
77.5°	142.8	18.2	10.4	10.4	9.1
80°	100.0	10.4	7.8	7.8	6.5
82.5°	61.0	6.5	5.2	5.2	5.2
85°	26.0	3.9	3.9	3.9	2.6
87.5°	3.9	1.3	1.3	1.3	1.3
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	19.56	20.91	19.92	21.23	21.54	8.13	9.48	8.49	9.80	10.11
	3H	21.31	22.51	21.69	22.84	23.21	8.79	10.00	9.17	10.33	10.69
	4H	22.01	23.13	22.41	23.48	23.87	8.99	10.11	9.39	10.46	10.85
	6H	22.52	23.56	22.94	23.93	24.32	9.11	10.14	9.53	10.51	10.91
	8H	22.66	23.64	23.09	24.03	24.44	9.15	10.12	9.58	10.52	10.92
	12H	22.71	23.65	23.15	24.03	24.46	9.16	10.09	9.59	10.47	10.91
4H	2H	19.36	20.49	19.77	20.84	21.22	8.68	9.81	9.08	10.16	10.54
	3H	21.16	22.08	21.57	22.48	22.88	9.48	10.40	9.90	10.81	11.21
	4H	21.85	22.67	22.29	23.09	23.54	9.74	10.57	10.18	10.98	11.43
	6H	22.42	23.13	22.88	23.58	24.04	9.94	10.65	10.40	11.10	11.56
	8H	22.60	23.26	23.07	23.71	24.18	9.99	10.66	10.46	11.10	11.57
	12H	22.68	23.27	23.17	23.75	24.23	10.03	10.61	10.51	11.10	11.57
8H	4H	21.73	22.39	22.20	22.84	23.31	10.06	10.72	10.53	11.17	11.64
	6H	22.28	22.82	22.78	23.32	23.80	10.31	10.85	10.81	11.34	11.82
	8H	22.46	22.94	22.98	23.46	23.95	10.39	10.88	10.91	11.39	11.89
	12H	22.56	22.99	23.08	23.49	24.06	10.47	10.90	10.99	11.40	11.97
12H	4H	21.69	22.27	22.17	22.75	23.23	10.10	10.69	10.59	11.17	11.64
	6H	22.22	22.71	22.74	23.22	23.72	10.35	10.84	10.87	11.35	11.84
	8H	22.42	22.85	22.93	23.34	23.91	10.48	10.91	10.99	11.40	11.97