

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: P1055684

Luminaire Tested: S123R3DR-H1000D830-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055684
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-H1000D830-X4F0-XX-UDD-F-S
Description: DEFINE 3, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

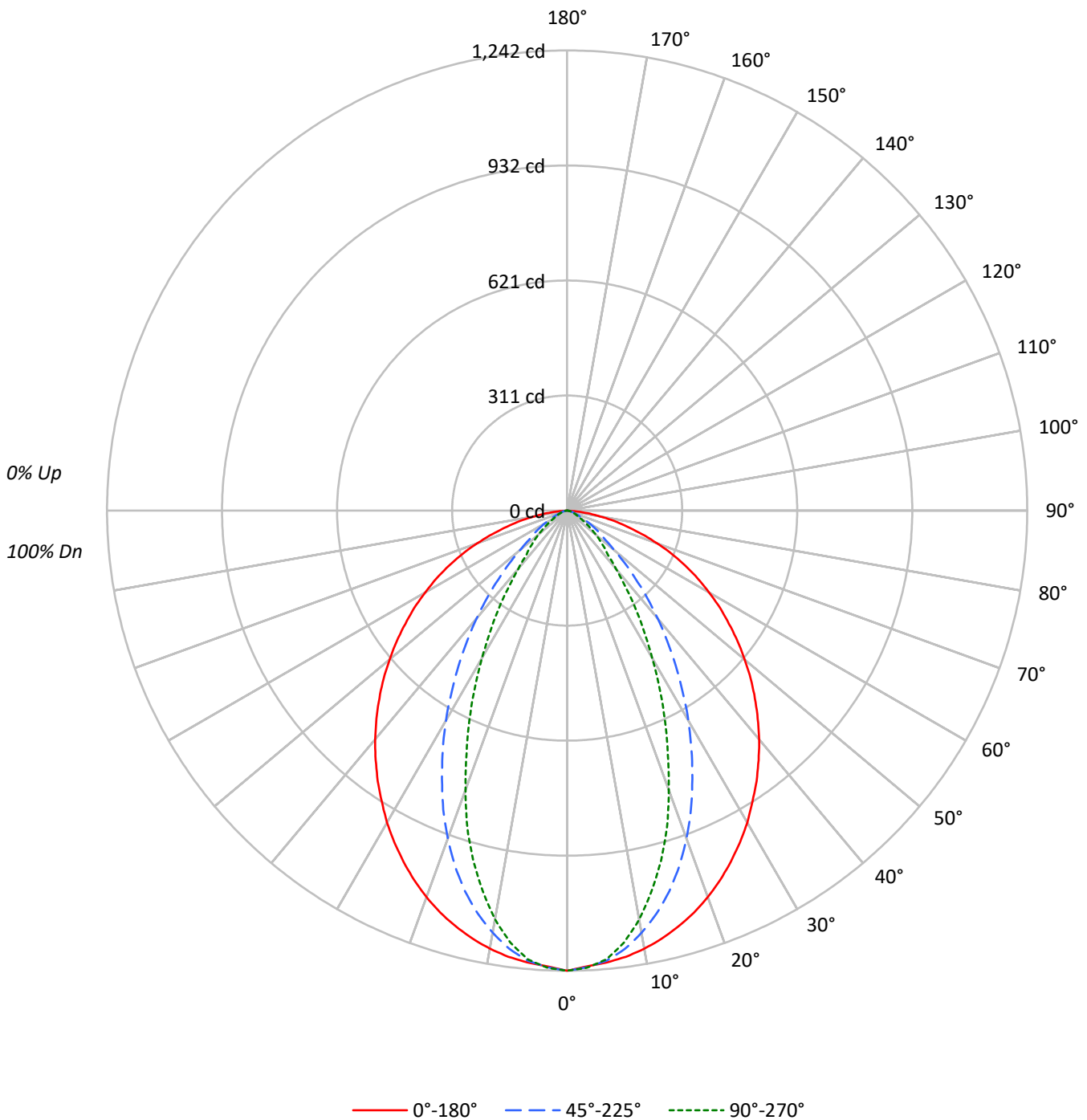
Lumens per Lamp: N/A
Luminaire Lumens: 1727.0 lumens
Efficiency: N/A
Efficacy: 55.9 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 0.77 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 30.9
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

TEST NUMBER: P1055684

CATALOG NUMBER: S123R3DR-H1000D830-X4F0-XX-UDD-F-S

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	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°	14972	14972	14972
5°	14816	14759	14715
10°	14698	14166	13719
15°	14501	13282	12210
20°	14241	12082	10285
25°	13905	10632	8300
30°	13536	9112	6391
35°	13115	7520	4729
40°	12690	5984	3223
45°	12222	4476	2428
50°	11723	3114	1898
55°	11208	2276	1385
60°	10672	1702	993
65°	10039	1141	773
70°	9088	828	624
75°	7840	601	494
80°	6290	493	410
85°	3251	484	332

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 12222 cd/sqm



TEST NUMBER: P1055684

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	114.8	6.6
10°-20°	298.8	17.3
20°-30°	375.4	21.7
30°-40°	349.7	20.2
40°-50°	267.7	15.5
50°-60°	177.9	10.3
60°-70°	95.9	5.6
70°-80°	39.3	2.3
80°-90°	7.5	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°	789.0	45.7
0°-40°	1138.7	65.9
0°-60°	1584.3	91.7
0°-90°	1727.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1727.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1242	1242	1242	1242	1242	
5°	1224	1237	1220	1215	1216	116
15°	1162	1143	1064	1002	978	327
25°	1045	975	799	666	624	481
35°	891	759	511	361	321	557
45°	717	530	262	154	142	553
55°	533	308	108	75	66	478
65°	352	119	40	29	27	348
75°	168	28	13	12	11	180
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°	1241.8	1241.8	1241.8	1241.8	1241.8
2.5°	1231.2	1246.5	1233.6	1234.8	1234.8
5°	1224.2	1237.1	1219.5	1214.8	1215.9
7.5°	1214.8	1223.0	1193.6	1178.3	1175.9
10°	1200.6	1203.0	1157.1	1130.0	1120.6
12.5°	1183.0	1174.7	1114.7	1070.0	1052.3
15°	1161.8	1143.0	1064.1	1001.7	978.2
17.5°	1138.2	1106.5	1006.4	925.2	896.9
20°	1110.0	1065.3	941.7	840.4	801.6
22.5°	1079.4	1021.7	873.4	753.3	709.8
25°	1045.3	974.6	799.2	666.2	623.9
27.5°	1009.9	924.0	726.3	583.8	540.3
30°	972.3	872.2	654.5	503.8	459.1
32.5°	931.1	815.7	580.3	429.6	384.9
35°	891.1	759.2	510.9	361.4	321.3
37.5°	848.7	702.7	443.8	301.3	256.6
40°	806.3	645.0	380.2	242.5	204.8
42.5°	761.6	587.4	320.2	193.0	163.6
45°	716.8	529.7	262.5	154.2	142.4
47.5°	672.1	472.0	211.9	133.0	121.2
50°	625.0	416.7	166.0	113.0	101.2
52.5°	580.3	361.4	129.5	93.0	82.4
55°	533.2	308.4	108.3	75.3	65.9
57.5°	489.7	254.3	89.5	58.9	51.8
60°	442.6	206.0	70.6	45.9	41.2
62.5°	397.9	161.3	54.1	36.5	33.0
65°	351.9	118.9	40.0	29.4	27.1
67.5°	306.0	85.9	30.6	23.5	22.4
70°	257.8	64.7	23.5	18.8	17.7
72.5°	211.9	45.9	17.7	15.3	14.1
75°	168.3	28.3	12.9	11.8	10.6
77.5°	129.5	16.5	9.4	9.4	8.2
80°	90.6	9.4	7.1	7.1	5.9
82.5°	55.3	5.9	4.7	4.7	4.7
85°	23.5	3.5	3.5	3.5	2.4
87.5°	3.5	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	19.22	20.57	19.58	20.89	21.20	7.79	9.15	8.16	9.46	9.78
	3H	20.97	22.17	21.35	22.50	22.87	8.45	9.66	8.83	9.99	10.35
	4H	21.67	22.79	22.07	23.14	23.53	8.65	9.78	9.05	10.13	10.51
	6H	22.18	23.21	22.60	23.58	23.98	8.77	9.81	9.19	10.18	10.57
	8H	22.32	23.30	22.75	23.69	24.10	8.81	9.79	9.24	10.18	10.58
	12H	22.37	23.31	22.80	23.69	24.12	8.82	9.75	9.25	10.14	10.57
4H	2H	19.02	20.15	19.43	20.50	20.88	8.35	9.47	8.75	9.82	10.20
	3H	20.82	21.74	21.23	22.14	22.54	9.15	10.07	9.56	10.47	10.87
	4H	21.51	22.33	21.95	22.75	23.20	9.40	10.23	9.84	10.65	11.09
	6H	22.08	22.79	22.54	23.24	23.70	9.60	10.31	10.06	10.76	11.22
	8H	22.26	22.92	22.72	23.37	23.84	9.65	10.32	10.12	10.76	11.23
	12H	22.34	22.93	22.83	23.41	23.88	9.69	10.27	10.17	10.76	11.23
8H	4H	21.39	22.05	21.86	22.50	22.97	9.72	10.38	10.19	10.83	11.30
	6H	21.94	22.48	22.44	22.98	23.46	9.97	10.51	10.47	11.00	11.48
	8H	22.12	22.60	22.64	23.12	23.61	10.05	10.54	10.57	11.05	11.54
	12H	22.22	22.65	22.74	23.14	23.71	10.13	10.56	10.65	11.06	11.63
12H	4H	21.34	21.93	21.83	22.41	22.89	9.76	10.35	10.25	10.83	11.30
	6H	21.88	22.37	22.40	22.88	23.38	10.01	10.50	10.53	11.01	11.50
	8H	22.08	22.51	22.59	23.00	23.57	10.14	10.57	10.65	11.06	11.63