

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: P1055666

Luminaire Tested: S123R3DR-S775D850-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055666
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-S775D850-X4F0-XX-UDD-F-S
Description: DEFINE 3, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

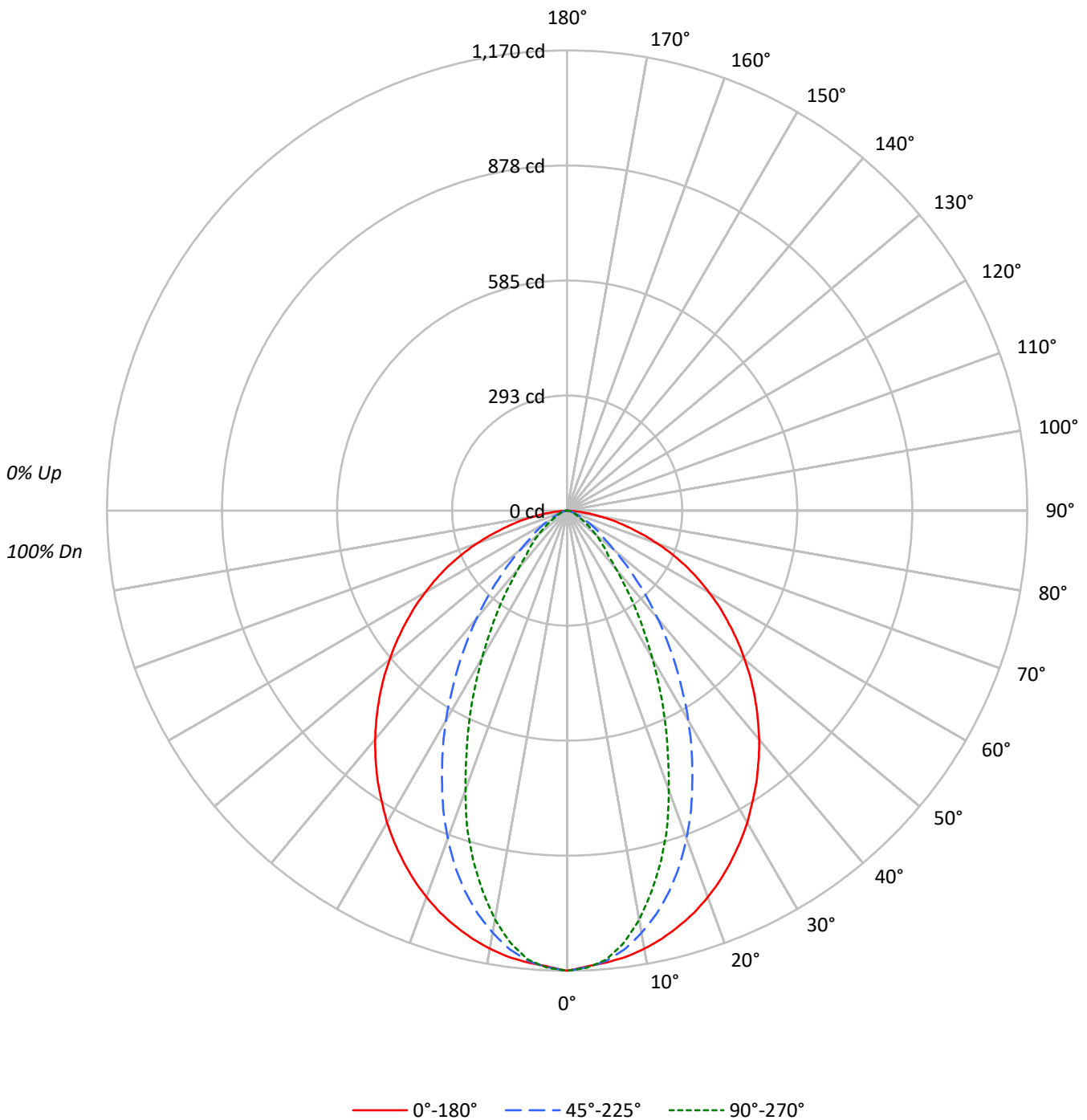
Lumens per Lamp: N/A
Luminaire Lumens: 1627.1 lumens
Efficiency: N/A
Efficacy: 61.6 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 0.77 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 26.4
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	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°	14106	14106	14106
5°	13959	13905	13865
10°	13849	13345	12926
15°	13662	12513	11503
20°	13418	11383	9689
25°	13101	10017	7819
30°	12752	8584	6021
35°	12356	7084	4457
40°	11957	5638	3038
45°	11516	4217	2288
50°	11046	2934	1789
55°	10560	2144	1305
60°	10055	1604	936
65°	9460	1076	727
70°	8562	783	585
75°	7388	568	466
80°	5929	465	382
85°	3071	456	304

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 11516 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	108.2	6.6
10°-20°	281.5	17.3
20°-30°	353.7	21.7
30°-40°	329.4	20.2
40°-50°	252.2	15.5
50°-60°	167.6	10.3
60°-70°	90.4	5.6
70°-80°	37.0	2.3
80°-90°	7.1	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°	743.4	45.7
0°-40°	1072.8	65.9
0°-60°	1492.6	91.7
0°-90°	1627.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1627.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1170	1170	1170	1170	1170	
5°	1153	1166	1149	1144	1146	109
15°	1095	1077	1002	944	922	308
25°	985	918	753	628	588	453
35°	840	715	481	340	303	525
45°	675	499	247	145	134	521
55°	502	291	102	71	62	450
65°	332	112	38	28	26	328
75°	159	27	12	11	10	170
85°	22	3	3	3	2	33
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1170.0	1170.0	1170.0	1170.0	1170.0
2.5°	1160.0	1174.4	1162.2	1163.3	1163.3
5°	1153.4	1165.6	1148.9	1144.5	1145.6
7.5°	1144.5	1152.2	1124.5	1110.1	1107.9
10°	1131.2	1133.4	1090.1	1064.6	1055.8
12.5°	1114.5	1106.8	1050.2	1008.1	991.4
15°	1094.6	1076.8	1002.5	943.8	921.6
17.5°	1072.4	1042.5	948.2	871.7	845.1
20°	1045.8	1003.6	887.2	791.8	755.2
22.5°	1017.0	962.6	822.9	709.8	668.7
25°	984.8	918.3	753.0	627.7	587.8
27.5°	951.5	870.6	684.3	550.1	509.0
30°	916.0	821.8	616.6	474.7	432.5
32.5°	877.2	768.5	546.7	404.8	362.6
35°	839.5	715.3	481.3	340.5	302.8
37.5°	799.6	662.1	418.1	283.9	241.8
40°	759.7	607.7	358.2	228.5	193.0
42.5°	717.5	553.4	301.6	181.9	154.2
45°	675.4	499.0	247.3	145.3	134.2
47.5°	633.2	444.7	199.6	125.3	114.2
50°	588.9	392.6	156.4	106.5	95.4
52.5°	546.7	340.5	122.0	87.6	77.6
55°	502.4	290.6	102.0	71.0	62.1
57.5°	461.3	239.5	84.3	55.4	48.8
60°	417.0	194.1	66.5	43.3	38.8
62.5°	374.8	151.9	51.0	34.4	31.1
65°	331.6	112.0	37.7	27.7	25.5
67.5°	288.3	81.0	28.8	22.2	21.1
70°	242.9	61.0	22.2	17.7	16.6
72.5°	199.6	43.3	16.6	14.4	13.3
75°	158.6	26.6	12.2	11.1	10.0
77.5°	122.0	15.5	8.9	8.9	7.8
80°	85.4	8.9	6.7	6.7	5.5
82.5°	52.1	5.5	4.4	4.4	4.4
85°	22.2	3.3	3.3	3.3	2.2
87.5°	3.3	1.1	1.1	1.1	1.1
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	19.01	20.36	19.37	20.68	20.99	7.58	8.93	7.94	9.25	9.56
	3H	20.76	21.97	21.14	22.30	22.66	8.24	9.45	8.62	9.78	10.14
	4H	21.46	22.59	21.86	22.94	23.32	8.44	9.56	8.84	9.91	10.29
	6H	21.97	23.01	22.39	23.38	23.77	8.56	9.59	8.97	9.96	10.36
	8H	22.11	23.09	22.54	23.48	23.89	8.59	9.57	9.02	9.96	10.37
	12H	22.17	23.10	22.60	23.48	23.91	8.60	9.54	9.04	9.92	10.35
4H	2H	18.82	19.94	19.22	20.29	20.67	8.13	9.26	8.54	9.61	9.99
	3H	20.61	21.53	21.02	21.93	22.34	8.93	9.85	9.35	10.26	10.66
	4H	21.30	22.13	21.74	22.55	22.99	9.19	10.02	9.63	10.43	10.88
	6H	21.87	22.58	22.34	23.03	23.50	9.39	10.10	9.85	10.55	11.01
	8H	22.05	22.71	22.52	23.16	23.63	9.44	10.11	9.91	10.55	11.02
	12H	22.13	22.72	22.62	23.20	23.68	9.47	10.06	9.96	10.54	11.02
8H	4H	21.18	21.84	21.65	22.29	22.76	9.51	10.17	9.97	10.62	11.09
	6H	21.73	22.28	22.24	22.77	23.25	9.76	10.30	10.26	10.79	11.27
	8H	21.91	22.40	22.43	22.91	23.40	9.84	10.33	10.36	10.84	11.33
	12H	22.01	22.44	22.53	22.94	23.51	9.92	10.35	10.44	10.84	11.41
12H	4H	21.14	21.72	21.62	22.21	22.68	9.55	10.14	10.04	10.62	11.09
	6H	21.68	22.16	22.20	22.68	23.17	9.80	10.29	10.32	10.80	11.29
	8H	21.87	22.30	22.39	22.79	23.36	9.93	10.35	10.44	10.85	11.42