

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1055400

Luminaire Tested: S122R3DR-H865D927-X4F0-XX-UDD-FLL-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2019
Report Number: P1055400
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-1)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122R3DR-H865D927-X4F0-XX-UDD-FLL-W
Description: DEFINE 2, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

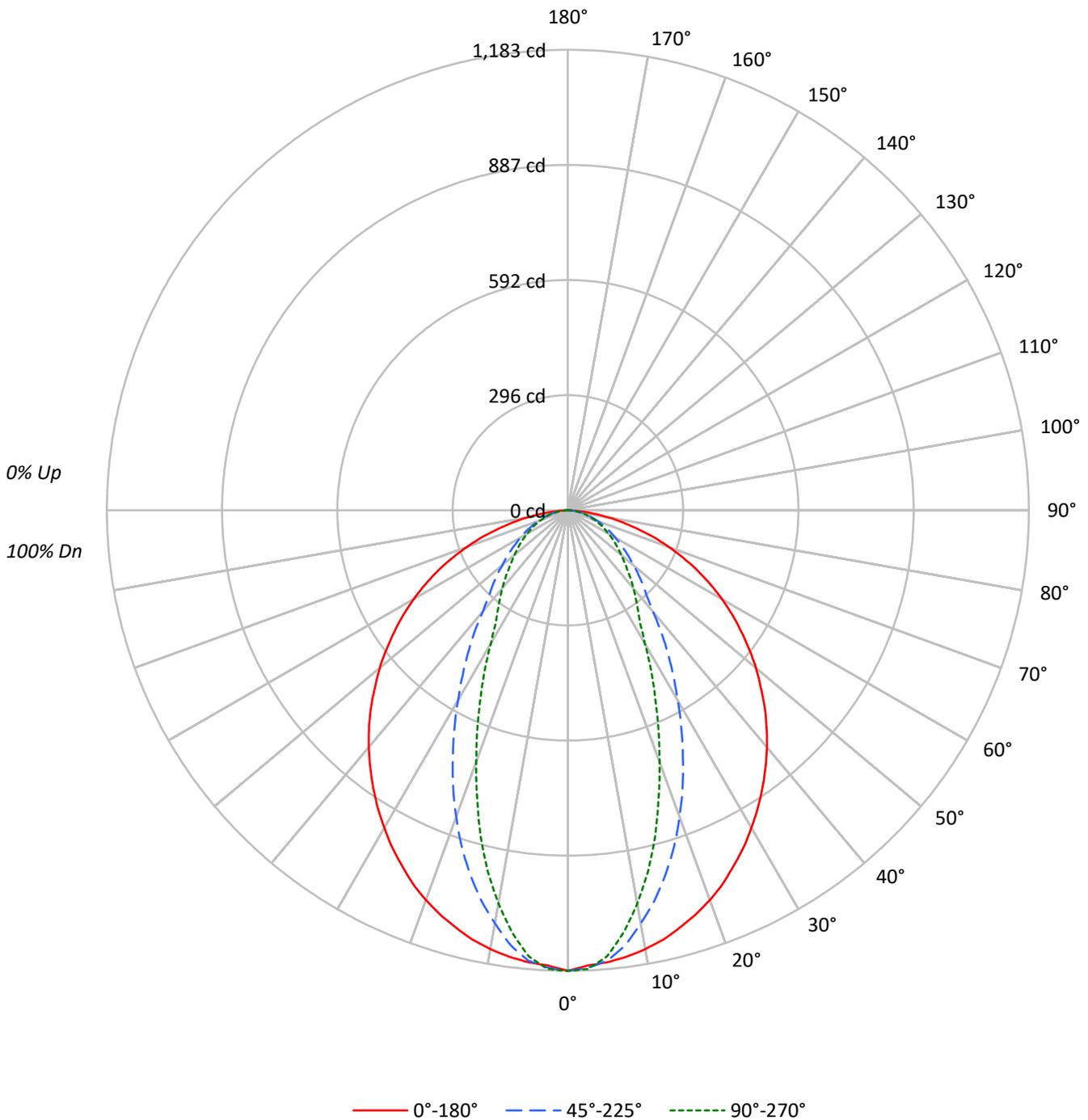
Lumens per Lamp: N/A
Luminaire Lumens: 1789.7 lumens
Efficiency: N/A
Efficacy: 57.9 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.71 / 0.9
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

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

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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	110	106	102	99	108	104	101	97	100	97	94	96	94	92	92	91	89					87				
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77					75				
3	94	85	78	72	92	83	77	71	80	75	70	78	73	69	75	71	68					66				
4	87	76	69	63	85	75	68	62	73	66	61	71	65	61	68	64	60					58				
5	81	69	61	55	79	68	61	55	66	60	55	64	59	54	63	58	54					52				
6	75	63	55	50	74	63	55	49	61	54	49	59	53	49	58	52	48					46				
7	71	58	50	45	69	58	50	45	56	49	44	55	49	44	53	48	44					42				
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40					38				
9	62	50	43	37	61	49	42	37	48	42	37	47	41	37	46	41	37					35				
10	59	47	39	35	58	46	39	34	45	39	34	44	38	34	43	38	34					32				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	22417	22417	22417
5°	22164	22090	21882
10°	22020	20727	19736
15°	21772	18996	16978
20°	21482	16894	13863
25°	21053	14602	11065
30°	20604	12336	8635
35°	20136	10320	7253
40°	19647	8367	6460
45°	19139	7317	5779
50°	18575	6473	5279
55°	17939	5850	4902
60°	17320	5324	4574
65°	16497	4877	4304
70°	15289	4548	4055
75°	13542	4129	3836
80°	11554	3884	3557
85°	7956	3435	3217

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 19139 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	108.4	6.1
10°-20°	273.7	15.3
20°-30°	337.3	18.8
30°-40°	323.6	18.1
40°-50°	279.2	15.6
50°-60°	216.6	12.1
60°-70°	148.3	8.3
70°-80°	80.5	4.5
80°-90°	22.1	1.2
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°	719.5	40.2
0°-40°	1043.1	58.3
0°-60°	1538.8	86.0
0°-90°	1789.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1789.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1183	1183	1183	1183	1183	
5°	1165	1182	1162	1147	1151	111
15°	1110	1076	968	889	866	313
25°	1007	899	698	570	529	464
35°	871	690	446	332	314	545
45°	714	481	273	226	216	550
55°	543	289	177	153	148	486
65°	368	157	109	99	96	363
75°	185	72	56	53	52	198
85°	37	18	16	16	15	47
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1183.2	1183.2	1183.2	1183.2	1183.2
2.5°	1170.4	1190.1	1176.3	1176.3	1179.3
5°	1165.4	1182.2	1161.5	1146.6	1150.6
7.5°	1156.5	1168.4	1126.8	1095.2	1094.2
10°	1144.6	1145.6	1077.4	1035.8	1025.9
12.5°	1129.8	1114.0	1026.9	964.6	949.7
15°	1110.0	1076.4	968.5	889.4	865.6
17.5°	1089.2	1037.8	906.2	807.3	774.6
20°	1065.5	991.3	837.9	725.2	687.6
22.5°	1038.8	946.8	769.7	646.0	606.4
25°	1007.1	899.3	698.5	569.8	529.3
27.5°	976.5	850.8	630.2	502.6	461.0
30°	941.8	798.4	563.9	438.3	394.7
32.5°	907.2	745.0	502.6	376.9	344.3
35°	870.6	690.5	446.2	332.4	313.6
37.5°	833.0	637.1	392.8	302.7	285.9
40°	794.4	583.7	338.3	274.0	261.2
42.5°	754.8	531.3	300.8	250.3	238.4
45°	714.3	480.8	273.1	225.6	215.7
47.5°	670.8	430.4	246.3	204.8	195.9
50°	630.2	381.9	219.6	186.0	179.1
52.5°	586.7	334.4	197.9	169.2	163.2
55°	543.1	288.9	177.1	153.3	148.4
57.5°	500.6	245.3	157.3	138.5	134.5
60°	457.1	210.7	140.5	124.7	120.7
62.5°	412.5	183.0	124.7	111.8	107.8
65°	368.0	157.3	108.8	98.9	96.0
67.5°	321.5	132.6	95.0	87.1	85.1
70°	276.0	110.8	82.1	75.2	73.2
72.5°	231.5	90.0	69.3	64.3	62.3
75°	185.0	72.2	56.4	53.4	52.4
77.5°	144.4	56.4	45.5	43.5	42.5
80°	105.9	41.6	35.6	33.6	32.6
82.5°	70.2	28.7	25.7	24.7	23.7
85°	36.6	17.8	15.8	15.8	14.8
87.5°	11.9	7.9	7.9	7.9	6.9
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	20.41	21.88	20.78	22.19	22.51	15.22	16.69	15.58	17.00	17.31
	3H	22.74	24.06	23.12	24.39	24.75	16.87	18.18	17.25	18.51	18.87
	4H	23.64	24.87	24.04	25.22	25.60	17.50	18.74	17.90	19.09	19.46
	6H	24.30	25.44	24.71	25.81	26.20	17.99	19.13	18.41	19.50	19.89
	8H	24.51	25.59	24.94	25.98	26.38	18.16	19.25	18.59	19.64	20.04
	12H	24.62	25.66	25.05	26.04	26.47	18.28	19.32	18.71	19.70	20.13
4H	2H	20.43	21.66	20.83	22.01	22.39	15.93	17.17	16.33	17.52	17.90
	3H	22.84	23.87	23.25	24.27	24.67	17.78	18.81	18.19	19.21	19.61
	4H	23.77	24.69	24.20	25.11	25.55	18.53	19.45	18.96	19.87	20.31
	6H	24.55	25.35	25.01	25.79	26.26	19.14	19.94	19.60	20.39	20.85
	8H	24.82	25.57	25.28	26.01	26.48	19.36	20.11	19.82	20.55	21.02
	12H	25.00	25.66	25.48	26.14	26.62	19.52	20.19	20.00	20.67	21.14
8H	4H	23.76	24.51	24.23	24.96	25.43	18.91	19.66	19.37	20.10	20.57
	6H	24.57	25.19	25.07	25.68	26.16	19.64	20.26	20.14	20.75	21.23
	8H	24.87	25.43	25.39	25.94	26.43	19.94	20.49	20.45	21.00	21.49
	12H	25.10	25.59	25.62	26.09	26.65	20.18	20.67	20.69	21.16	21.73
12H	4H	23.74	24.41	24.23	24.89	25.36	18.97	19.63	19.45	20.11	20.58
	6H	24.55	25.10	25.06	25.61	26.10	19.73	20.29	20.25	20.80	21.28
	8H	24.88	25.37	25.39	25.86	26.43	20.09	20.57	20.60	21.07	21.63