

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: P1055377

Luminaire Tested: S122R3DR-H675D935-X4F0-XX-UDD-FLL-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2019
Report Number: P1055377
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-2)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122R3DR-H675D935-X4F0-XX-UDD-FLL-B
Description: DEFINE 2, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

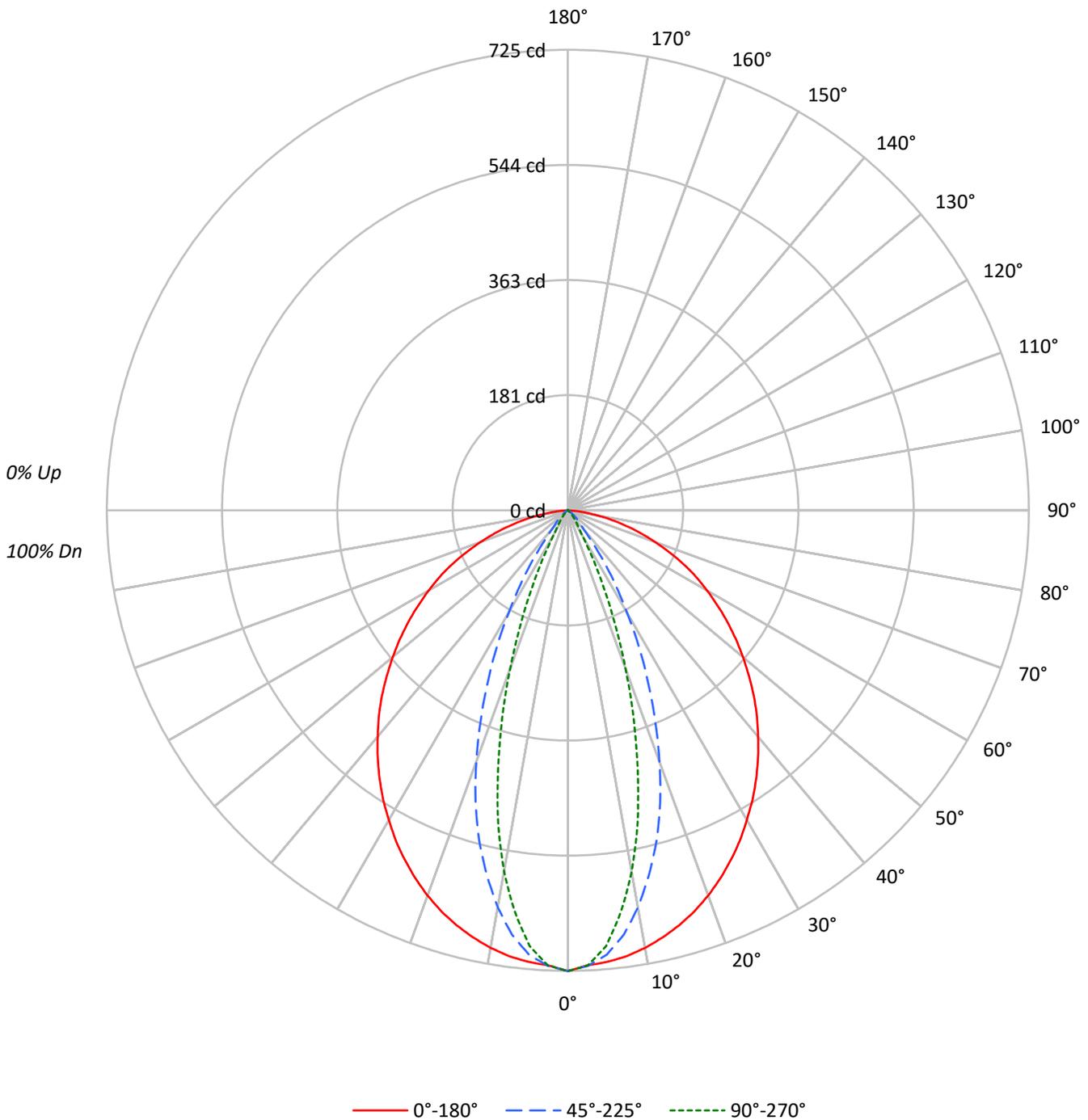
Lumens per Lamp: N/A
Luminaire Lumens: 659.9 lumens
Efficiency: N/A
Efficacy: 27.7 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.56 / 0.7
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 23.8
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: P1055377

CATALOG NUMBER: S122R3DR-H675D935-X4F0-XX-UDD-FLL-B

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	112	109	106	103	110	106	104	101	102	100	98	99	97	95	95	94	92	91					91			
2	105	99	94	90	103	97	93	89	94	90	87	91	88	85	88	86	83	81					81			
3	98	91	85	80	96	89	84	79	86	82	78	84	80	77	82	78	75	74					74			
4	92	83	77	72	90	82	76	71	80	75	70	78	73	70	76	72	69	67					67			
5	87	77	70	65	85	76	70	65	74	69	64	72	68	64	71	66	63	61					61			
6	82	72	65	60	80	71	64	59	69	63	59	68	63	59	66	62	58	56					56			
7	77	67	60	55	76	66	59	55	65	59	55	63	58	54	62	57	54	52					52			
8	73	62	56	51	72	62	55	51	61	55	51	60	54	50	59	54	50	49					49			
9	70	59	52	48	68	58	52	47	57	51	47	56	51	47	55	50	47	45					45			
10	66	55	49	45	65	55	49	44	54	48	44	53	48	44	52	48	44	43					43			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13743	13743	13743
5°	13573	13351	13098
10°	13457	12207	11116
15°	13263	10564	8324
20°	13010	8490	5329
25°	12689	6223	2736
30°	12312	4067	895
35°	11937	2257	520
40°	11505	908	289
45°	11079	603	113
50°	10593	345	50
55°	10108	165	26
60°	9571	64	0
65°	9006	36	0
70°	8082	44	0
75°	6954	59	0
80°	5281	0	0
85°	2174	174	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 11079 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	65.0	9.9
10°-20°	151.1	22.9
20°-30°	153.4	23.2
30°-40°	115.1	17.4
40°-50°	80.6	12.2
50°-60°	49.3	7.5
60°-70°	29.4	4.4
70°-80°	13.5	2.1
80°-90°	2.4	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°	369.5	56.0
0°-40°	484.6	73.4
0°-60°	614.6	93.1
0°-90°	659.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	659.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	725	725	725	725	725	
5°	714	720	702	689	689	68
15°	676	640	539	456	424	191
25°	607	500	298	170	131	279
35°	516	336	98	29	22	323
45°	414	178	22	7	4	319
55°	306	54	5	2	1	274
65°	201	16	1	1	0	198
75°	95	2	1	1	0	101
85°	10	0	1	1	0	17
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	725.4	725.4	725.4	725.4	725.4
2.5°	717.0	727.9	717.9	716.2	717.0
5°	713.7	720.4	702.0	688.7	688.7
7.5°	707.9	707.9	673.7	646.2	637.8
10°	699.5	690.4	634.5	590.3	577.8
12.5°	688.7	667.0	588.6	526.1	506.1
15°	676.2	639.5	538.6	456.1	424.4
17.5°	662.0	608.7	482.8	380.2	343.5
20°	645.3	575.3	421.1	302.7	264.3
22.5°	627.0	538.6	358.5	233.5	192.6
25°	607.0	500.3	297.7	170.1	130.9
27.5°	586.1	460.2	241.8	116.7	80.0
30°	562.8	418.6	185.9	69.2	40.9
32.5°	540.3	378.5	139.2	37.5	30.0
35°	516.1	336.0	97.6	29.2	22.5
37.5°	491.1	296.0	60.0	21.7	16.7
40°	465.2	255.1	36.7	15.8	11.7
42.5°	440.2	216.8	29.2	10.8	7.5
45°	413.5	177.6	22.5	6.7	4.2
47.5°	386.0	141.7	16.7	4.2	2.5
50°	359.4	110.1	11.7	2.5	1.7
52.5°	332.7	80.9	7.5	1.7	0.8
55°	306.0	54.2	5.0	1.7	0.8
57.5°	279.3	38.4	3.3	0.8	0.8
60°	252.6	30.0	1.7	0.8	0.0
62.5°	227.6	23.3	1.7	0.8	0.8
65°	200.9	15.8	0.8	0.8	0.0
67.5°	172.6	10.0	0.8	0.8	0.0
70°	145.9	5.8	0.8	0.8	0.0
72.5°	120.1	3.3	0.8	0.8	0.0
75°	95.0	1.7	0.8	0.8	0.0
77.5°	70.9	0.8	0.0	0.8	0.0
80°	48.4	0.0	0.0	0.8	0.0
82.5°	28.3	0.0	0.0	0.8	0.0
85°	10.0	0.0	0.8	0.8	0.0
87.5°	0.0	0.0	0.8	0.8	0.0
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	15.32	16.58	15.68	16.89	17.21	0.00	0.00	0.00	0.00	0.00
	3H	19.06	20.18	19.44	20.51	20.87	0.00	0.00	0.00	0.00	0.00
	4H	20.37	21.41	20.77	21.76	22.14	0.00	0.00	0.00	0.00	0.00
	6H	21.22	22.18	21.64	22.55	22.95	0.00	0.00	0.00	0.00	0.00
	8H	21.44	22.34	21.87	22.73	23.14	0.00	0.00	0.00	0.00	0.00
	12H	21.50	22.36	21.93	22.75	23.18	0.00	0.00	0.00	0.00	0.00
4H	2H	15.07	16.11	15.48	16.46	16.85	0.00	0.00	0.00	0.00	0.00
	3H	18.81	19.66	19.23	20.07	20.47	0.00	0.00	0.00	0.00	0.00
	4H	20.11	20.87	20.54	21.29	21.73	0.00	0.00	0.00	0.00	0.00
	6H	21.03	21.68	21.49	22.13	22.60	0.00	0.00	0.00	0.00	0.00
	8H	21.28	21.90	21.76	22.34	22.82	0.00	0.00	0.00	0.00	0.00
	12H	21.39	21.92	21.87	22.41	22.88	0.00	0.00	0.00	0.00	0.00
8H	4H	19.96	20.57	20.43	21.02	21.49	0.00	0.00	0.00	0.00	0.00
	6H	20.86	21.36	21.37	21.86	22.34	0.00	0.00	0.00	0.00	0.00
	8H	21.12	21.57	21.65	22.08	22.57	0.00	0.00	0.00	0.00	0.00
	12H	21.24	21.63	21.75	22.12	22.70	0.00	0.00	0.00	0.00	0.00
12H	4H	19.91	20.45	20.40	20.94	21.41	0.00	0.00	0.00	0.00	0.00
	6H	20.80	21.25	21.32	21.76	22.25	0.00	0.00	0.00	0.00	0.00
	8H	21.08	21.47	21.59	21.96	22.53	0.00	0.00	0.00	0.00	0.00