

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: P1055406

Luminaire Tested: S122R3DR-H865D935-X4F0-XX-UDD-FLL-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2019
Report Number: P1055406
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-H865D935-X4F0-XX-UDD-FLL-W
Description: DEFINE 2, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

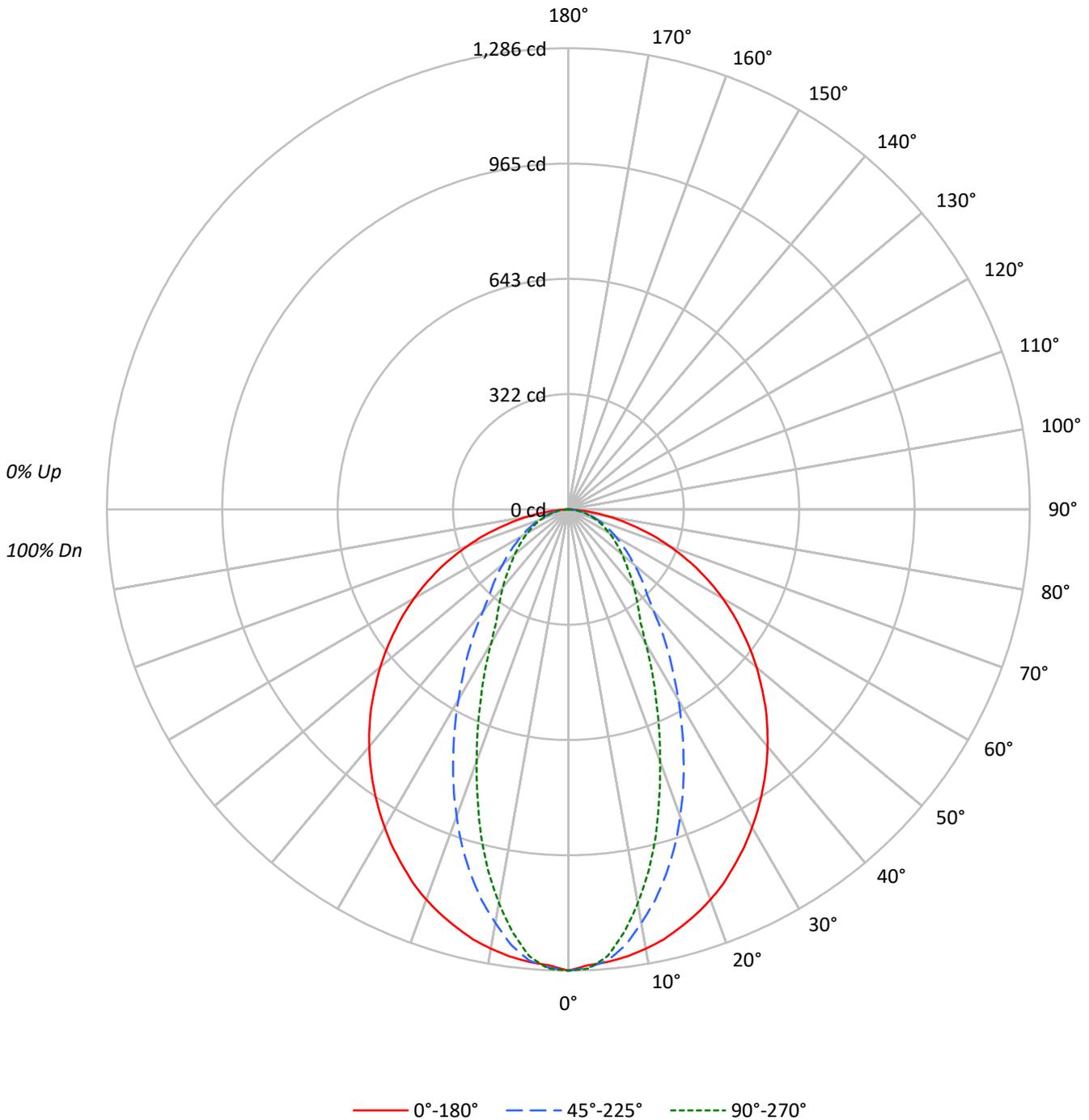
Lumens per Lamp: N/A
Luminaire Lumens: 1945.2 lumens
Efficiency: N/A
Efficacy: 62.9 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.71 / 0.9
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 30.9
Input Voltage (V): 120
Input Current (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	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°	24364	24364	24364
5°	24088	24007	23782
10°	23934	22528	21451
15°	23663	20648	18453
20°	23347	18361	15067
25°	22882	15869	12026
30°	22393	13408	9385
35°	21884	11215	7885
40°	21354	9094	7021
45°	20800	7952	6280
50°	20187	7036	5736
55°	19498	6358	5328
60°	18825	5786	4971
65°	17932	5303	4676
70°	16618	4941	4409
75°	14721	4487	4172
80°	12558	4222	3873
85°	8652	3739	3500

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 20800 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	117.8	6.1
10°-20°	297.5	15.3
20°-30°	366.6	18.8
30°-40°	351.7	18.1
40°-50°	303.4	15.6
50°-60°	235.4	12.1
60°-70°	161.2	8.3
70°-80°	87.5	4.5
80°-90°	24.0	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°	782.0	40.2
0°-40°	1133.7	58.3
0°-60°	1672.5	86.0
0°-90°	1945.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1945.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1286	1286	1286	1286	1286	
5°	1267	1285	1262	1246	1250	120
15°	1206	1170	1053	967	941	340
25°	1095	977	759	619	575	505
35°	946	750	485	361	341	592
45°	776	523	297	245	234	598
55°	590	314	192	167	161	528
65°	400	171	118	108	104	395
75°	201	78	61	58	57	215
85°	40	19	17	17	16	51
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1286.0	1286.0	1286.0	1286.0	1286.0
2.5°	1272.0	1293.5	1278.5	1278.5	1281.7
5°	1266.6	1284.9	1262.3	1246.2	1250.5
7.5°	1257.0	1269.9	1224.7	1190.3	1189.2
10°	1244.1	1245.1	1171.0	1125.8	1115.0
12.5°	1227.9	1210.7	1116.1	1048.4	1032.2
15°	1206.4	1169.9	1052.7	966.7	940.8
17.5°	1183.9	1127.9	984.9	877.4	841.9
20°	1158.0	1077.4	910.7	788.2	747.3
22.5°	1129.0	1029.0	836.5	702.1	659.1
25°	1094.6	977.4	759.1	619.3	575.3
27.5°	1061.3	924.7	684.9	546.2	501.1
30°	1023.6	867.7	612.9	476.3	429.0
32.5°	986.0	809.7	546.2	409.7	374.2
35°	946.2	750.5	484.9	361.3	340.9
37.5°	905.4	692.5	426.9	329.0	310.7
40°	863.4	634.4	367.7	297.8	283.9
42.5°	820.4	577.4	326.9	272.0	259.1
45°	776.3	522.6	296.8	245.2	234.4
47.5°	729.0	467.7	267.7	222.6	212.9
50°	684.9	415.0	238.7	202.1	194.6
52.5°	637.6	363.4	215.1	183.9	177.4
55°	590.3	314.0	192.5	166.7	161.3
57.5°	544.1	266.7	171.0	150.5	146.2
60°	496.8	229.0	152.7	135.5	131.2
62.5°	448.4	198.9	135.5	121.5	117.2
65°	400.0	171.0	118.3	107.5	104.3
67.5°	349.5	144.1	103.2	94.6	92.5
70°	300.0	120.4	89.2	81.7	79.6
72.5°	251.6	97.8	75.3	69.9	67.7
75°	201.1	78.5	61.3	58.1	57.0
77.5°	157.0	61.3	49.5	47.3	46.2
80°	115.1	45.2	38.7	36.6	35.5
82.5°	76.3	31.2	28.0	26.9	25.8
85°	39.8	19.4	17.2	17.2	16.1
87.5°	12.9	8.6	8.6	8.6	7.5
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	20.70	22.17	21.07	22.49	22.80	15.51	16.98	15.87	17.29	17.60
	3H	23.03	24.35	23.41	24.68	25.04	17.16	18.47	17.53	18.80	19.16
	4H	23.93	25.16	24.33	25.51	25.89	17.79	19.03	18.19	19.37	19.75
	6H	24.59	25.73	25.00	26.10	26.49	18.28	19.42	18.70	19.79	20.18
	8H	24.80	25.88	25.23	26.27	26.68	18.45	19.54	18.88	19.93	20.33
	12H	24.91	25.95	25.35	26.33	26.76	18.57	19.61	19.00	19.99	20.42
4H	2H	20.72	21.95	21.12	22.30	22.68	16.22	17.46	16.62	17.81	18.19
	3H	23.13	24.16	23.54	24.56	24.96	18.07	19.10	18.48	19.50	19.90
	4H	24.06	24.98	24.49	25.40	25.84	18.82	19.74	19.25	20.16	20.60
	6H	24.84	25.64	25.30	26.08	26.55	19.43	20.24	19.89	20.68	21.14
	8H	25.11	25.86	25.57	26.30	26.77	19.65	20.40	20.11	20.84	21.31
	12H	25.29	25.96	25.77	26.43	26.91	19.81	20.48	20.29	20.96	21.43
8H	4H	24.05	24.80	24.52	25.25	25.72	19.20	19.95	19.66	20.39	20.86
	6H	24.86	25.48	25.36	25.97	26.45	19.94	20.55	20.43	21.05	21.52
	8H	25.16	25.72	25.68	26.23	26.72	20.23	20.79	20.75	21.30	21.79
	12H	25.39	25.88	25.91	26.38	26.94	20.48	20.96	20.99	21.46	22.02
12H	4H	24.03	24.70	24.52	25.18	25.65	19.26	19.92	19.74	20.40	20.87
	6H	24.84	25.39	25.35	25.90	26.39	20.02	20.58	20.54	21.09	21.58
	8H	25.17	25.66	25.68	26.15	26.72	20.38	20.87	20.89	21.36	21.93