

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: P1055281

Luminaire Tested: S122R3DR-H1005D835-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055281
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-H1005D835-X4F0-XX-UDD-F-B
Description: DEFINE 2, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

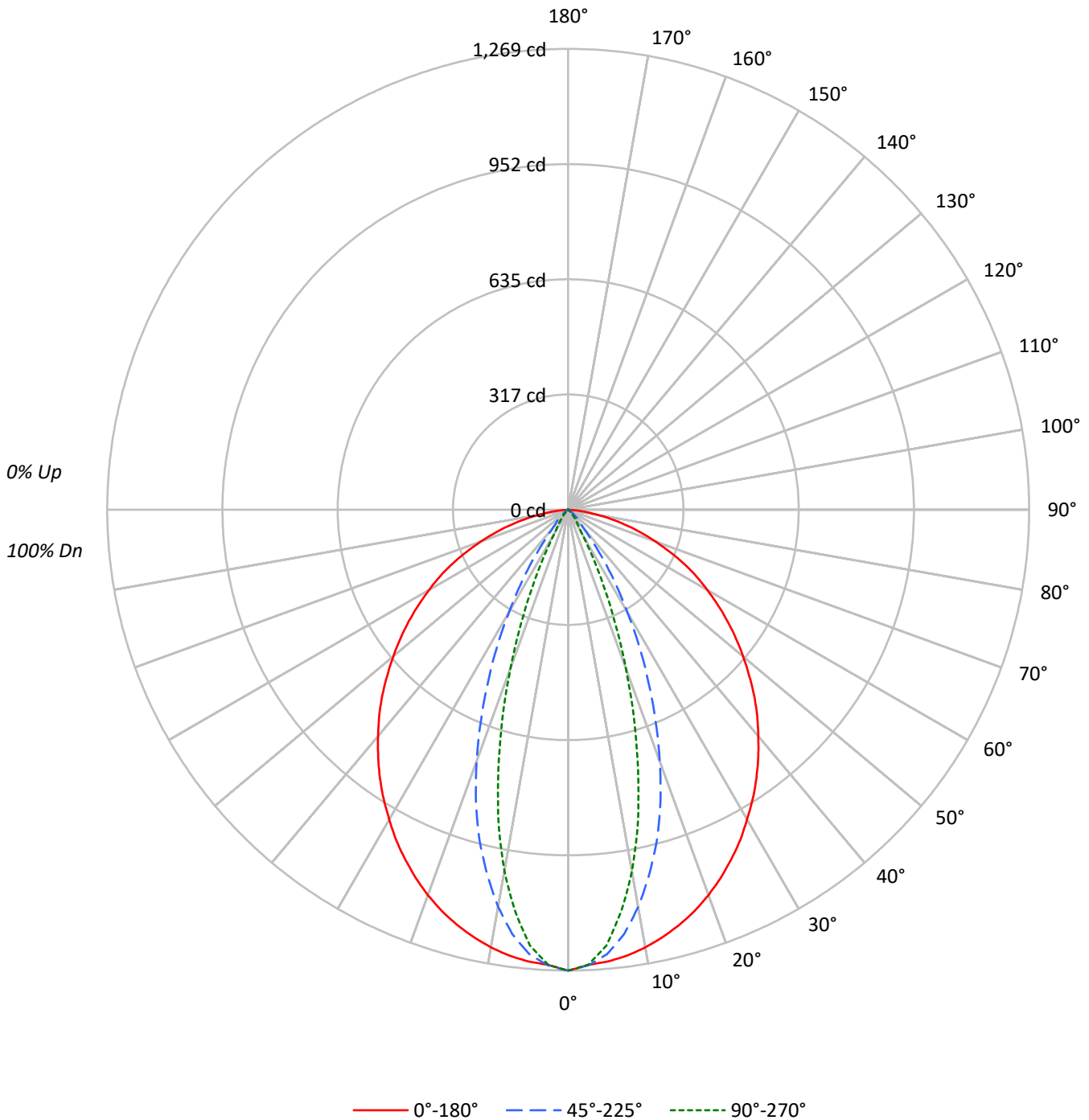
Lumens per Lamp: N/A
Luminaire Lumens: 1154.8 lumens
Efficiency: N/A
Efficacy: 31.6 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.56 / 0.7
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 36.6
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	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	62	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	47	44	43					43			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	24046	24046	24046
5°	23750	23362	22917
10°	23547	21358	19450
15°	23208	18484	14565
20°	22767	14853	9325
25°	22203	10887	4787
30°	21544	7117	1564
35°	20887	3948	911
40°	20134	1588	505
45°	19388	1056	196
50°	18534	601	85
55°	17685	291	50
60°	16748	110	0
65°	15762	67	0
70°	14142	83	0
75°	12173	110	0
80°	9230	0	0
85°	3804	326	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 19388 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	113.8	9.9
10°-20°	264.4	22.9
20°-30°	268.4	23.2
30°-40°	201.4	17.4
40°-50°	141.0	12.2
50°-60°	86.3	7.5
60°-70°	51.4	4.5
70°-80°	23.7	2.1
80°-90°	4.3	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°	646.6	56.0
0°-40°	848.0	73.4
0°-60°	1075.4	93.1
0°-90°	1154.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1154.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1269	1269	1269	1269	1269	
5°	1249	1260	1228	1205	1205	118
15°	1183	1119	942	798	743	333
25°	1062	875	521	298	229	489
35°	903	588	171	51	39	564
45°	724	311	39	12	7	558
55°	535	95	9	3	2	479
65°	352	28	2	2	0	346
75°	166	3	2	2	0	177
85°	18	0	2	2	0	30
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1269.2	1269.2	1269.2	1269.2	1269.2
2.5°	1254.6	1273.6	1256.1	1253.2	1254.6
5°	1248.8	1260.5	1228.4	1205.0	1205.0
7.5°	1238.6	1238.6	1178.8	1130.6	1116.1
10°	1224.0	1208.0	1110.2	1032.9	1011.0
12.5°	1205.0	1167.1	1030.0	920.6	885.5
15°	1183.2	1119.0	942.4	798.0	742.6
17.5°	1158.4	1065.0	844.7	665.3	601.1
20°	1129.2	1006.6	736.7	529.6	462.5
22.5°	1097.1	942.4	627.3	408.5	337.0
25°	1062.1	875.3	520.8	297.6	229.0
27.5°	1025.6	805.3	423.1	204.2	140.1
30°	984.8	732.4	325.3	121.1	71.5
32.5°	945.4	662.3	243.6	65.7	52.5
35°	903.1	587.9	170.7	51.1	39.4
37.5°	859.3	517.9	105.0	37.9	29.2
40°	814.1	446.4	64.2	27.7	20.4
42.5°	770.3	379.3	51.1	19.0	13.1
45°	723.6	310.7	39.4	11.7	7.3
47.5°	675.5	248.0	29.2	7.3	4.4
50°	628.8	192.6	20.4	4.4	2.9
52.5°	582.1	141.5	13.1	2.9	1.5
55°	535.4	94.8	8.8	2.9	1.5
57.5°	488.7	67.1	5.8	1.5	1.5
60°	442.0	52.5	2.9	1.5	0.0
62.5°	398.3	40.8	2.9	1.5	1.5
65°	351.6	27.7	1.5	1.5	0.0
67.5°	302.0	17.5	1.5	1.5	0.0
70°	255.3	10.2	1.5	1.5	0.0
72.5°	210.1	5.8	1.5	1.5	0.0
75°	166.3	2.9	1.5	1.5	0.0
77.5°	124.0	1.5	0.0	1.5	0.0
80°	84.6	0.0	0.0	1.5	0.0
82.5°	49.6	0.0	0.0	1.5	0.0
85°	17.5	0.0	1.5	1.5	0.0
87.5°	0.0	0.0	1.5	1.5	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	17.26	18.52	17.62	18.83	19.15	0.00	0.00	0.00	0.00	0.00
	3H	21.00	22.12	21.38	22.45	22.81	0.00	0.00	0.00	0.00	0.00
	4H	22.31	23.35	22.71	23.70	24.09	0.00	0.00	0.00	0.00	0.00
	6H	23.17	24.12	23.58	24.49	24.89	0.00	0.00	0.00	0.00	0.00
	8H	23.38	24.28	23.81	24.67	25.08	0.00	0.00	0.00	0.00	0.00
	12H	23.44	24.31	23.88	24.69	25.12	0.00	0.00	0.00	0.00	0.00
4H	2H	17.01	18.05	17.42	18.40	18.79	0.00	0.00	0.00	0.00	0.00
	3H	20.75	21.61	21.17	22.01	22.42	0.00	0.00	0.00	0.00	0.00
	4H	22.05	22.81	22.49	23.23	23.68	0.00	0.00	0.00	0.00	0.00
	6H	22.97	23.63	23.43	24.07	24.54	0.00	0.00	0.00	0.00	0.00
	8H	23.23	23.84	23.70	24.29	24.76	0.00	0.00	0.00	0.00	0.00
	12H	23.33	23.87	23.82	24.35	24.83	0.00	0.00	0.00	0.00	0.00
8H	4H	21.91	22.52	22.38	22.97	23.44	0.00	0.00	0.00	0.00	0.00
	6H	22.81	23.30	23.31	23.80	24.28	0.00	0.00	0.00	0.00	0.00
	8H	23.06	23.51	23.59	24.02	24.52	0.00	0.00	0.00	0.00	0.00
	12H	23.18	23.57	23.70	24.07	24.64	0.00	0.00	0.00	0.00	0.00
12H	4H	21.86	22.39	22.34	22.88	23.35	0.00	0.00	0.00	0.00	0.00
	6H	22.74	23.19	23.27	23.70	24.20	0.00	0.00	0.00	0.00	0.00
	8H	23.02	23.41	23.54	23.90	24.48	0.00	0.00	0.00	0.00	0.00