

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: P1055280

Luminaire Tested: S122R3DR-H1005D830-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055280
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-H1005D830-X4F0-XX-UDD-F-W
Description: DEFINE 2, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

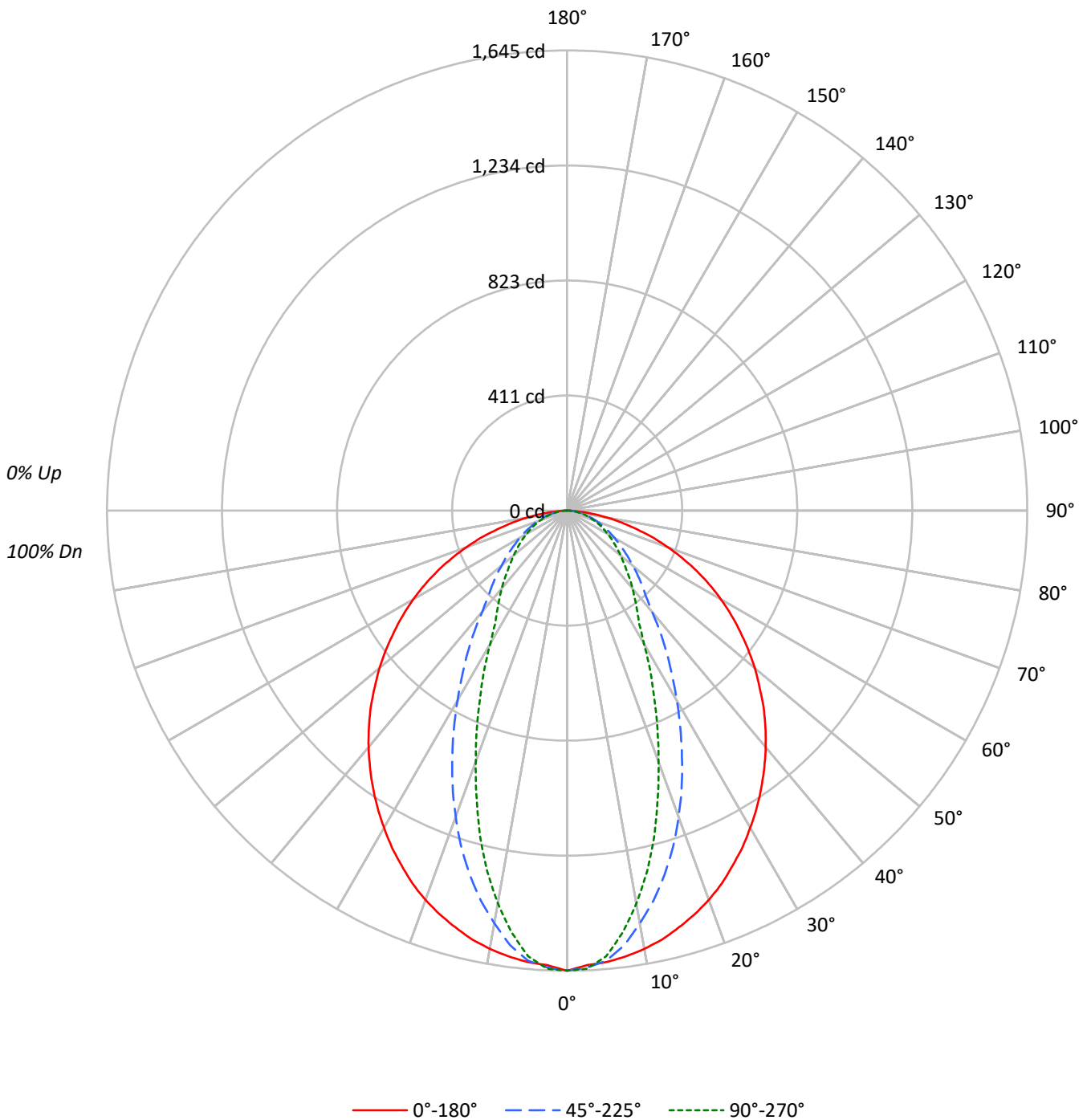
Lumens per Lamp: N/A
Luminaire Lumens: 2487.6 lumens
Efficiency: N/A
Efficacy: 68.0 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.71 / 0.9
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	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°	31158	31158	31158
5°	30806	30701	30414
10°	30606	28807	27432
15°	30261	26405	23600
20°	29858	23482	19269
25°	29262	20294	15379
30°	28639	17147	12002
35°	27988	14344	10082
40°	27309	11631	8978
45°	26601	10168	8033
50°	25817	8999	7336
55°	24935	8129	6814
60°	24073	7400	6358
65°	22930	6783	5980
70°	21249	6320	5639
75°	18820	5739	5336
80°	16049	5401	4953
85°	11065	4782	4478

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 26601 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	150.7	6.1
10°-20°	380.5	15.3
20°-30°	468.8	18.8
30°-40°	449.8	18.1
40°-50°	388.0	15.6
50°-60°	301.0	12.1
60°-70°	206.1	8.3
70°-80°	111.9	4.5
80°-90°	30.7	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°	1000.0	40.2
0°-40°	1449.8	58.3
0°-60°	2138.8	86.0
0°-90°	2487.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2487.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1645	1645	1645	1645	1645	
5°	1620	1643	1614	1594	1599	154
15°	1543	1496	1346	1236	1203	435
25°	1400	1250	971	792	736	645
35°	1210	960	620	462	436	757
45°	993	668	380	314	300	765
55°	755	402	246	213	206	676
65°	512	219	151	138	133	505
75°	257	100	78	74	73	275
85°	51	25	22	22	21	65
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1644.6	1644.6	1644.6	1644.6	1644.6
2.5°	1626.7	1654.2	1634.9	1634.9	1639.1
5°	1619.8	1643.2	1614.3	1593.7	1599.2
7.5°	1607.4	1623.9	1566.2	1522.2	1520.8
10°	1590.9	1592.3	1497.4	1439.7	1425.9
12.5°	1570.3	1548.3	1427.3	1340.7	1320.1
15°	1542.8	1496.1	1346.2	1236.2	1203.2
17.5°	1513.9	1442.4	1259.6	1122.0	1076.7
20°	1480.9	1377.8	1164.7	1007.9	955.7
22.5°	1443.8	1315.9	1069.8	897.9	842.9
25°	1399.8	1249.9	970.8	792.0	735.7
27.5°	1357.2	1182.6	875.9	698.5	640.8
30°	1309.1	1109.7	783.8	609.2	548.6
32.5°	1260.9	1035.4	698.5	523.9	478.5
35°	1210.1	959.8	620.2	462.0	435.9
37.5°	1157.8	885.5	545.9	420.8	397.4
40°	1104.2	811.3	470.3	380.9	363.0
42.5°	1049.2	738.4	418.0	347.9	331.4
45°	992.8	668.3	379.5	313.5	299.8
47.5°	932.3	598.2	342.4	284.6	272.3
50°	875.9	530.8	305.3	258.5	248.9
52.5°	815.4	464.8	275.0	235.1	226.9
55°	754.9	401.5	246.1	213.1	206.3
57.5°	695.8	341.0	218.6	192.5	187.0
60°	635.3	292.9	195.3	173.3	167.8
62.5°	573.4	254.4	173.3	155.4	149.9
65°	511.5	218.6	151.3	137.5	133.4
67.5°	446.9	184.3	132.0	121.0	118.3
70°	383.6	154.0	114.1	104.5	101.8
72.5°	321.8	125.1	96.3	89.4	86.6
75°	257.1	100.4	78.4	74.3	72.9
77.5°	200.8	78.4	63.3	60.5	59.1
80°	147.1	57.8	49.5	46.8	45.4
82.5°	97.6	39.9	35.8	34.4	33.0
85°	50.9	24.8	22.0	22.0	20.6
87.5°	16.5	11.0	11.0	11.0	9.6
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	21.56	23.03	21.92	23.34	23.65	16.36	17.83	16.73	18.14	18.46
	3H	23.89	25.20	24.27	25.53	25.89	18.01	19.33	18.39	19.66	20.02
	4H	24.78	26.02	25.18	26.37	26.75	18.65	19.88	19.05	20.23	20.61
	6H	25.45	26.58	25.86	26.95	27.34	19.14	20.28	19.55	20.65	21.04
	8H	25.65	26.74	26.08	27.13	27.53	19.31	20.39	19.74	20.78	21.19
	12H	25.77	26.81	26.20	27.19	27.62	19.43	20.46	19.86	20.85	21.28
4H	2H	21.57	22.81	21.97	23.16	23.54	17.08	18.31	17.48	18.66	19.04
	3H	23.99	25.01	24.40	25.41	25.81	18.93	19.95	19.34	20.35	20.75
	4H	24.92	25.84	25.35	26.25	26.69	19.67	20.60	20.11	21.01	21.45
	6H	25.69	26.50	26.15	26.94	27.40	20.29	21.09	20.75	21.53	22.00
	8H	25.96	26.71	26.43	27.16	27.63	20.51	21.26	20.97	21.70	22.17
	12H	26.14	26.81	26.62	27.29	27.76	20.67	21.34	21.15	21.81	22.29
8H	4H	24.91	25.66	25.37	26.10	26.57	20.05	20.80	20.52	21.25	21.72
	6H	25.72	26.33	26.21	26.83	27.30	20.79	21.41	21.29	21.90	22.38
	8H	26.02	26.57	26.53	27.08	27.57	21.09	21.64	21.60	22.15	22.64
	12H	26.25	26.74	26.76	27.23	27.80	21.33	21.82	21.84	22.31	22.88
12H	4H	24.89	25.56	25.37	26.04	26.51	20.11	20.78	20.59	21.26	21.73
	6H	25.69	26.25	26.21	26.76	27.25	20.88	21.43	21.39	21.94	22.43
	8H	26.03	26.52	26.54	27.01	27.57	21.23	21.72	21.74	22.22	22.78