

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: P1055343

Luminaire Tested: S122R3DR-H485D850-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055343
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-H485D850-X4F0-XX-UDD-F-W
Description: DEFINE 2, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

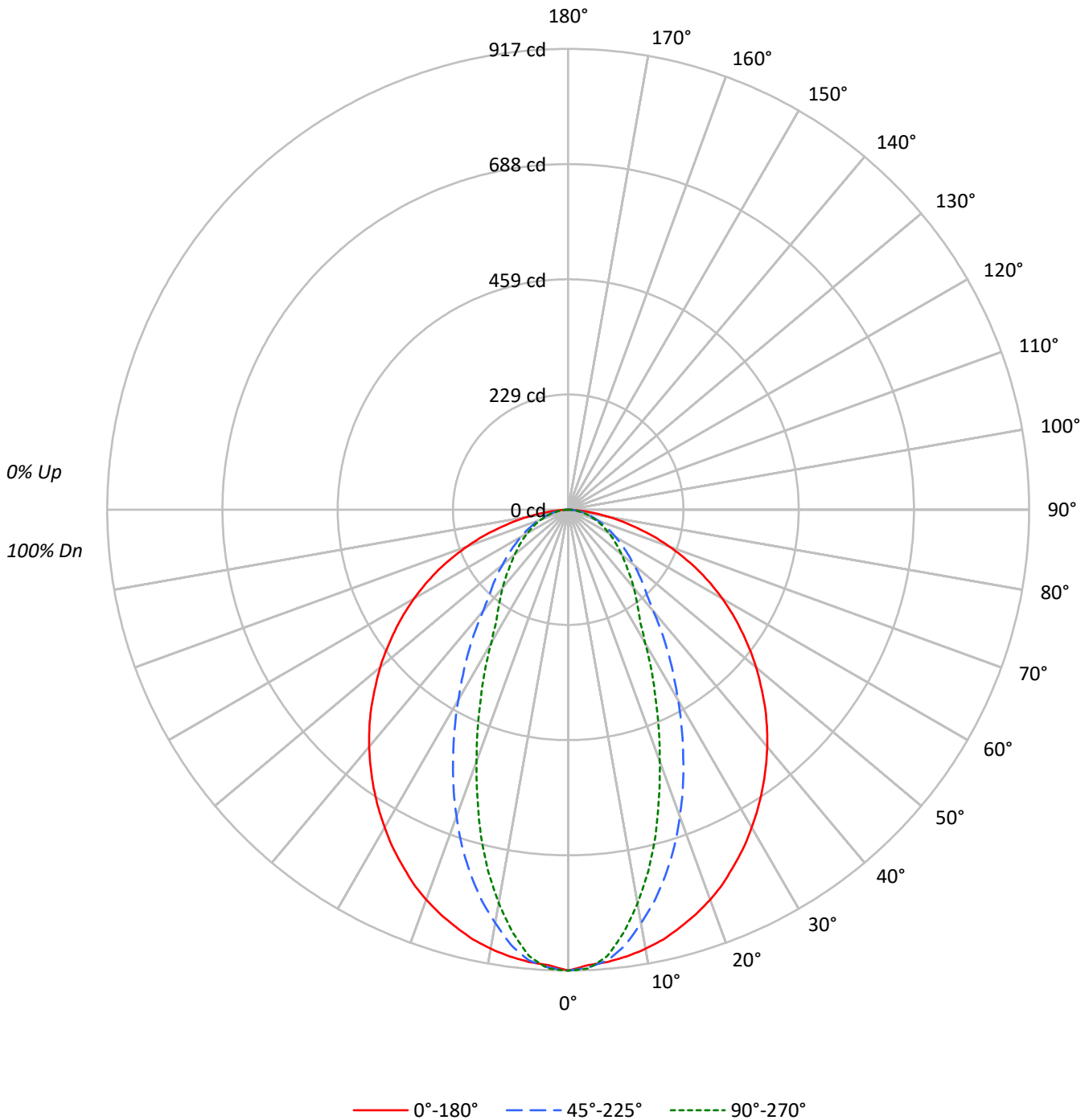
Lumens per Lamp: N/A
Luminaire Lumens: 1387.2 lumens
Efficiency: N/A
Efficacy: 80.2 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.71 / 0.9
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 17.3
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	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°	17375	17375	17375
5°	17179	17120	16960
10°	17068	16066	15298
15°	16876	14724	13161
20°	16652	13095	10744
25°	16318	11318	8575
30°	15970	9562	6694
35°	15607	7998	5623
40°	15230	6487	5006
45°	14833	5670	4480
50°	14398	5017	4091
55°	13906	4535	3799
60°	13425	4126	3547
65°	12790	3784	3335
70°	11849	3523	3141
75°	10497	3199	2972
80°	8947	3011	2760
85°	6174	2674	2500

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 14833 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	84.0	6.1
10°-20°	212.2	15.3
20°-30°	261.5	18.8
30°-40°	250.8	18.1
40°-50°	216.4	15.6
50°-60°	167.9	12.1
60°-70°	114.9	8.3
70°-80°	62.4	4.5
80°-90°	17.1	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°	557.7	40.2
0°-40°	808.5	58.3
0°-60°	1192.7	86.0
0°-90°	1387.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1387.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	917	917	917	917	917	
5°	903	916	900	889	892	86
15°	860	834	751	689	671	243
25°	781	697	541	442	410	360
35°	675	535	346	258	243	422
45°	554	373	212	175	167	427
55°	421	224	137	119	115	377
65°	285	122	84	77	74	282
75°	143	56	44	41	41	154
85°	28	14	12	12	12	36
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	917.1	917.1	917.1	917.1	917.1
2.5°	907.1	922.5	911.7	911.7	914.0
5°	903.3	916.3	900.2	888.7	891.8
7.5°	896.4	905.6	873.4	848.9	848.1
10°	887.2	888.0	835.1	802.9	795.2
12.5°	875.7	863.4	796.0	747.6	736.1
15°	860.4	834.3	750.7	689.4	671.0
17.5°	844.3	804.4	702.4	625.7	600.4
20°	825.9	768.4	649.5	562.1	532.9
22.5°	805.2	733.8	596.6	500.7	470.1
25°	780.6	697.0	541.4	441.7	410.2
27.5°	756.9	659.5	488.5	389.5	357.3
30°	730.0	618.8	437.1	339.7	306.0
32.5°	703.2	577.4	389.5	292.2	266.9
35°	674.8	535.2	345.8	257.7	243.1
37.5°	645.7	493.8	304.4	234.6	221.6
40°	615.8	452.4	262.3	212.4	202.4
42.5°	585.1	411.8	233.1	194.0	184.8
45°	553.6	372.7	211.6	174.8	167.2
47.5°	519.9	333.6	190.9	158.7	151.8
50°	488.5	296.0	170.2	144.2	138.8
52.5°	454.7	259.2	153.4	131.1	126.5
55°	421.0	223.9	137.3	118.9	115.0
57.5°	388.0	190.2	121.9	107.4	104.3
60°	354.3	163.3	108.9	96.6	93.6
62.5°	319.8	141.9	96.6	86.7	83.6
65°	285.3	121.9	84.4	76.7	74.4
67.5°	249.2	102.8	73.6	67.5	65.9
70°	213.9	85.9	63.6	58.3	56.7
72.5°	179.4	69.8	53.7	49.8	48.3
75°	143.4	56.0	43.7	41.4	40.6
77.5°	112.0	43.7	35.3	33.7	33.0
80°	82.0	32.2	27.6	26.1	25.3
82.5°	54.4	22.2	19.9	19.2	18.4
85°	28.4	13.8	12.3	12.3	11.5
87.5°	9.2	6.1	6.1	6.1	5.4
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	19.53	21.00	19.89	21.31	21.63	14.34	15.80	14.70	16.12	16.43
	3H	21.86	23.17	22.24	23.50	23.87	15.98	17.30	16.36	17.63	17.99
	4H	22.75	23.99	23.15	24.34	24.72	16.62	17.85	17.02	18.20	18.58
	6H	23.42	24.56	23.83	24.92	25.32	17.11	18.25	17.52	18.62	19.01
	8H	23.62	24.71	24.05	25.10	25.50	17.28	18.36	17.71	18.75	19.16
	12H	23.74	24.78	24.17	25.16	25.59	17.40	18.43	17.83	18.82	19.25
4H	2H	19.55	20.78	19.95	21.13	21.51	15.05	16.29	15.45	16.64	17.02
	3H	21.96	22.98	22.37	23.38	23.78	16.90	17.92	17.31	18.32	18.73
	4H	22.89	23.81	23.32	24.23	24.67	17.64	18.57	18.08	18.98	19.42
	6H	23.66	24.47	24.12	24.91	25.37	18.26	19.06	18.72	19.50	19.97
	8H	23.93	24.68	24.40	25.13	25.60	18.48	19.23	18.94	19.67	20.14
	12H	24.11	24.78	24.59	25.26	25.73	18.64	19.31	19.12	19.79	20.26
8H	4H	22.88	23.63	23.34	24.07	24.54	18.02	18.77	18.49	19.22	19.69
	6H	23.69	24.30	24.18	24.80	25.28	18.76	19.38	19.26	19.87	20.35
	8H	23.99	24.54	24.50	25.05	25.54	19.06	19.61	19.57	20.12	20.61
	12H	24.22	24.71	24.73	25.20	25.77	19.30	19.79	19.81	20.28	20.85
12H	4H	22.86	23.53	23.34	24.01	24.48	18.08	18.75	18.56	19.23	19.70
	6H	23.66	24.22	24.18	24.73	25.22	18.85	19.40	19.36	19.91	20.40
	8H	24.00	24.49	24.51	24.98	25.54	19.20	19.69	19.71	20.19	20.75