

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: P1055364

Luminaire Tested: S122R3DR-H675D835-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055364
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-H675D835-X4F0-XX-UDD-F-W
Description: DEFINE 2, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

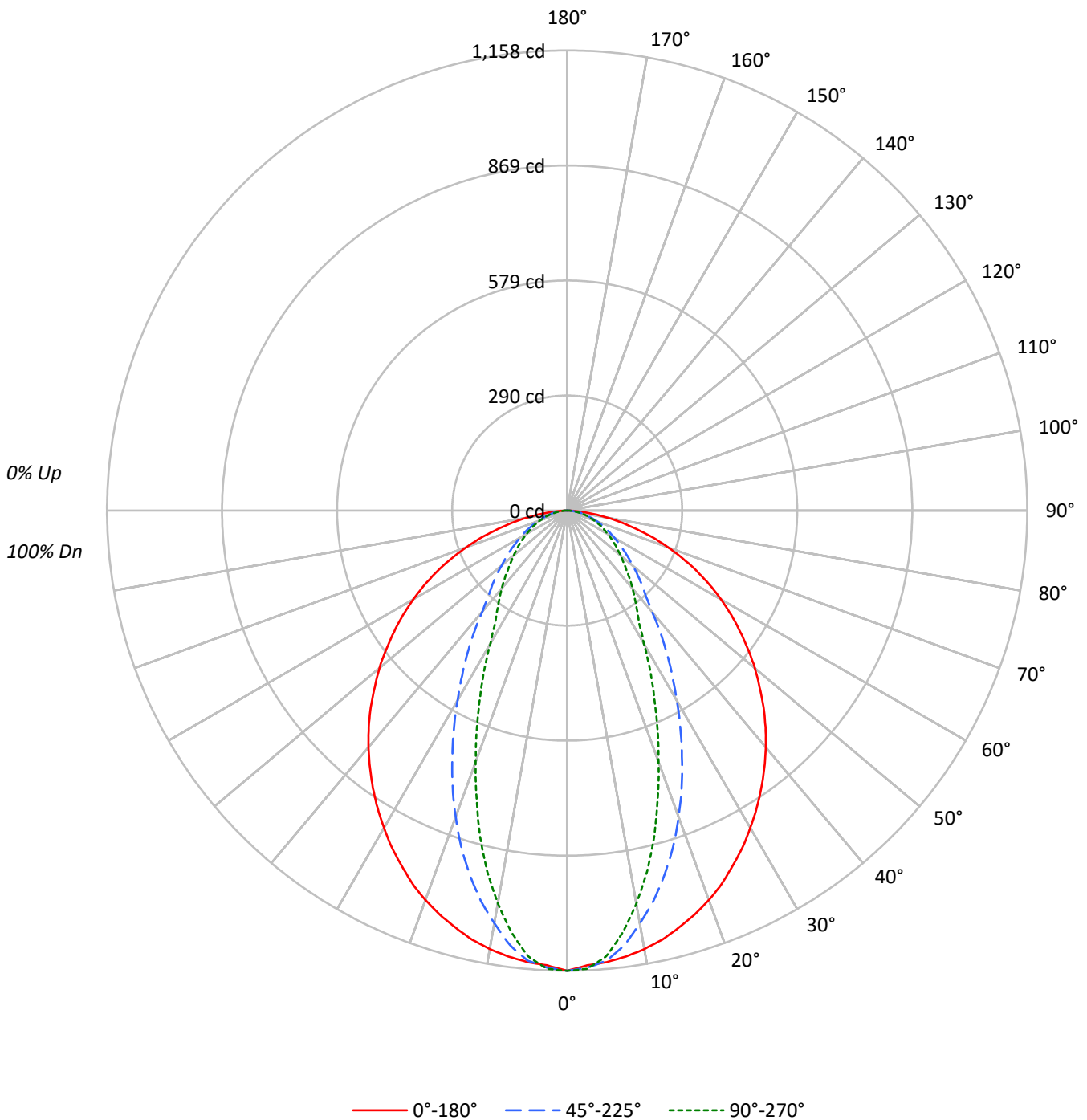
Lumens per Lamp: N/A
Luminaire Lumens: 1751.8 lumens
Efficiency: N/A
Efficacy: 73.6 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.71 / 0.9
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 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

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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°	21943	21943	21943
5°	21694	21622	21418
10°	21554	20289	19319
15°	21311	18594	16619
20°	21027	16537	13569
25°	20608	14292	10831
30°	20168	12076	8453
35°	19710	10100	7100
40°	19232	8191	6322
45°	18734	7162	5656
50°	18183	6337	5167
55°	17559	5724	4799
60°	16953	5210	4475
65°	16148	4774	4210
70°	14967	4454	3972
75°	13257	4041	3755
80°	11303	3808	3491
85°	7782	3369	3152

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 18734 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	106.1	6.1
10°-20°	267.9	15.3
20°-30°	330.2	18.8
30°-40°	316.8	18.1
40°-50°	273.2	15.6
50°-60°	212.0	12.1
60°-70°	145.1	8.3
70°-80°	78.8	4.5
80°-90°	21.6	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°	704.3	40.2
0°-40°	1021.0	58.3
0°-60°	1506.3	86.0
0°-90°	1751.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1751.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1158	1158	1158	1158	1158	
5°	1141	1157	1137	1122	1126	108
15°	1086	1054	948	871	847	306
25°	986	880	684	558	518	454
35°	852	676	437	325	307	533
45°	699	471	267	221	211	539
55°	532	283	173	150	145	476
65°	360	154	106	97	94	356
75°	181	71	55	52	51	194
85°	36	17	16	16	14	46
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1158.2	1158.2	1158.2	1158.2	1158.2
2.5°	1145.6	1164.9	1151.4	1151.4	1154.3
5°	1140.7	1157.2	1136.9	1122.3	1126.2
7.5°	1132.0	1143.6	1103.0	1072.0	1071.0
10°	1120.4	1121.4	1054.6	1013.9	1004.2
12.5°	1105.9	1090.4	1005.2	944.2	929.6
15°	1086.5	1053.6	948.0	870.6	847.3
17.5°	1066.2	1015.8	887.0	790.2	758.2
20°	1042.9	970.3	820.2	709.8	673.0
22.5°	1016.8	926.7	753.4	632.3	593.6
25°	985.8	880.2	683.7	557.8	518.1
27.5°	955.8	832.8	616.9	491.9	451.3
30°	921.9	781.5	552.0	429.0	386.4
32.5°	888.0	729.2	491.9	368.9	337.0
35°	852.2	675.9	436.7	325.4	307.0
37.5°	815.4	623.6	384.4	296.3	279.9
40°	777.6	571.3	331.2	268.2	255.6
42.5°	738.9	520.0	294.4	245.0	233.4
45°	699.2	470.6	267.3	220.8	211.1
47.5°	656.6	421.2	241.1	200.5	191.7
50°	616.9	373.8	215.0	182.1	175.3
52.5°	574.2	327.3	193.7	165.6	159.8
55°	531.6	282.8	173.3	150.1	145.3
57.5°	490.0	240.2	154.0	135.6	131.7
60°	447.4	206.3	137.5	122.0	118.1
62.5°	403.8	179.1	122.0	109.4	105.6
65°	360.2	154.0	106.5	96.8	93.9
67.5°	314.7	129.8	93.0	85.2	83.3
70°	270.2	108.5	80.4	73.6	71.7
72.5°	226.6	88.1	67.8	62.9	61.0
75°	181.1	70.7	55.2	52.3	51.3
77.5°	141.4	55.2	44.5	42.6	41.6
80°	103.6	40.7	34.9	32.9	32.0
82.5°	68.8	28.1	25.2	24.2	23.2
85°	35.8	17.4	15.5	15.5	14.5
87.5°	11.6	7.7	7.7	7.7	6.8
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	20.34	21.81	20.71	22.12	22.44	15.15	16.61	15.51	16.93	17.24
	3H	22.67	23.99	23.05	24.31	24.68	16.79	18.11	17.17	18.44	18.80
	4H	23.57	24.80	23.97	25.15	25.53	17.43	18.66	17.83	19.01	19.39
	6H	24.23	25.37	24.64	25.73	26.13	17.92	19.06	18.33	19.43	19.82
	8H	24.44	25.52	24.86	25.91	26.31	18.09	19.18	18.52	19.57	19.97
	12H	24.55	25.59	24.98	25.97	26.40	18.21	19.24	18.64	19.63	20.06
4H	2H	20.36	21.59	20.76	21.94	22.32	15.86	17.10	16.26	17.44	17.82
	3H	22.77	23.79	23.18	24.19	24.60	17.71	18.73	18.12	19.13	19.54
	4H	23.70	24.62	24.13	25.04	25.48	18.46	19.38	18.89	19.79	20.23
	6H	24.48	25.28	24.93	25.72	26.18	19.07	19.87	19.53	20.32	20.78
	8H	24.75	25.50	25.21	25.94	26.41	19.29	20.04	19.75	20.48	20.95
	12H	24.92	25.59	25.41	26.07	26.54	19.45	20.12	19.93	20.59	21.07
8H	4H	23.69	24.44	24.16	24.89	25.35	18.83	19.58	19.30	20.03	20.50
	6H	24.50	25.12	25.00	25.61	26.09	19.57	20.19	20.07	20.68	21.16
	8H	24.80	25.35	25.32	25.87	26.35	19.87	20.42	20.38	20.93	21.42
	12H	25.03	25.52	25.54	26.01	26.58	20.11	20.60	20.62	21.09	21.66
12H	4H	23.67	24.34	24.15	24.82	25.29	18.89	19.56	19.37	20.04	20.51
	6H	24.47	25.03	24.99	25.54	26.03	19.66	20.21	20.17	20.72	21.21
	8H	24.81	25.30	25.32	25.79	26.36	20.01	20.50	20.52	21.00	21.56