

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: P243213

Luminaire Tested: S122RDRP-H290D927-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243213
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-63)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122RDRP-H290D927-X4F0-XX-UDD-F-W
Description: DEFINE 2 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

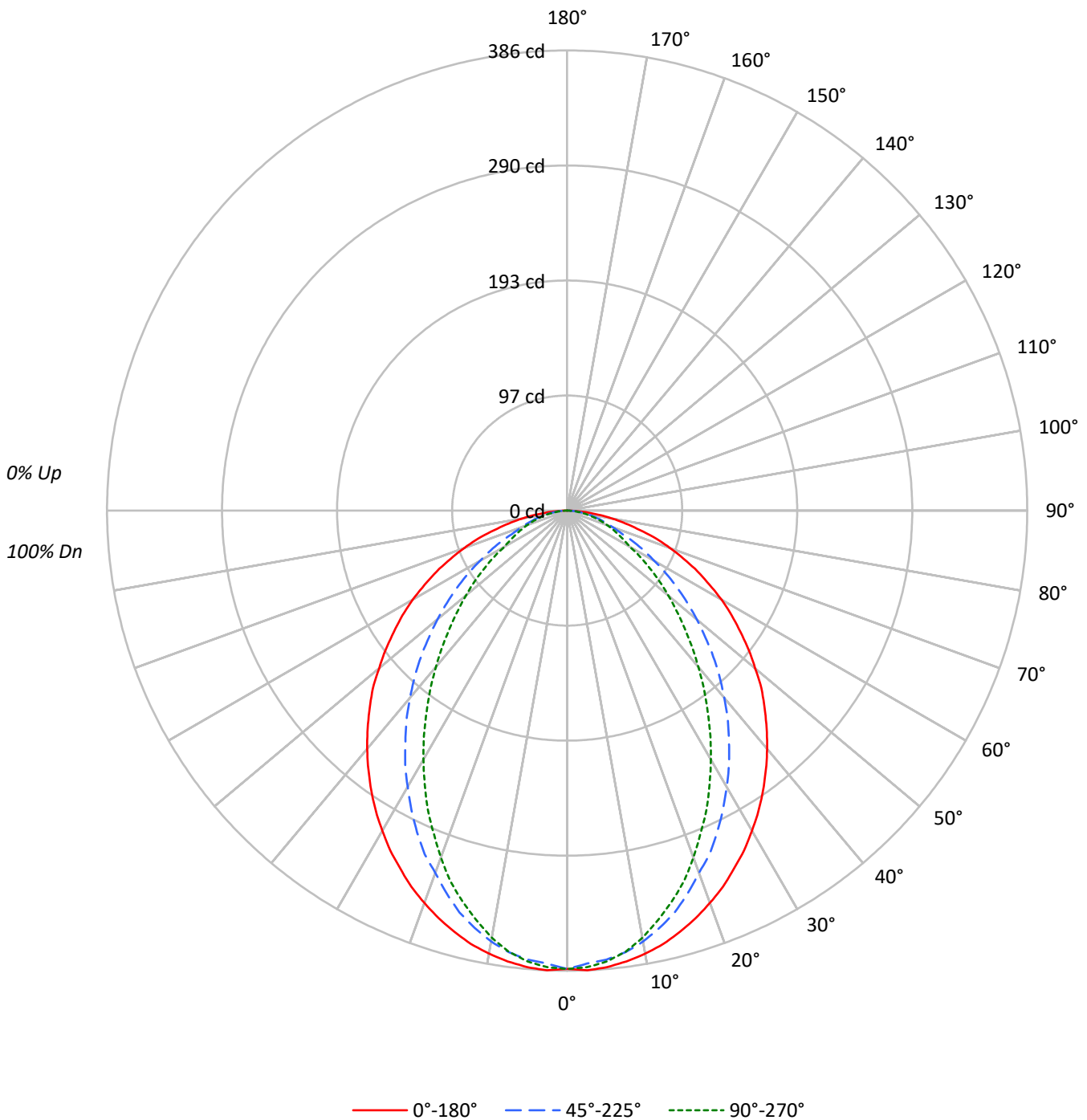
Lumens per Lamp: N/A
Luminaire Lumens: 788.3 lumens
Efficiency: N/A
Efficacy: 70.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 0.15' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 11.2
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

TEST NUMBER: P243213

CATALOG NUMBER: S122RDRP-H290D927-X4F0-XX-UDD-F-W

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	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86
2	101	94	87	82	98	92	86	81	88	83	79	85	81	77	82	79	76	74
3	93	83	76	70	90	82	75	69	79	73	68	76	71	67	74	69	66	64
4	86	75	66	60	83	73	66	60	71	64	59	69	63	58	66	62	57	55
5	79	67	59	53	77	66	58	52	64	57	52	62	56	51	60	55	51	49
6	74	61	53	47	72	60	52	46	58	51	46	57	50	46	55	50	45	43
7	68	56	47	42	67	55	47	42	53	46	41	52	46	41	51	45	41	39
8	64	51	43	38	62	51	43	37	49	42	37	48	42	37	47	41	37	35
9	60	47	39	34	59	47	39	34	46	39	34	44	38	34	44	38	34	32
10	56	44	36	31	55	43	36	31	42	36	31	41	35	31	41	35	31	29

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7322	7322	7322
5°	7350	7229	7260
10°	7300	7100	7036
15°	7213	6880	6691
20°	7099	6553	6278
25°	6963	6259	5813
30°	6820	5886	5303
35°	6662	5499	4774
40°	6490	5095	4254
45°	6306	4671	3744
50°	6101	4205	3283
55°	5891	3746	2829
60°	5699	3223	2312
65°	5440	2722	2136
70°	5118	2256	1994
75°	4659	2053	1833
80°	4179	1821	1634
85°	3475	1530	1442

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6306 cd/sqm

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CATALOG NUMBER: S122RDRP-H290D927-X4F0-XX-UDD-F-W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	36.0	4.6
10°-20°	98.7	12.5
20°-30°	138.4	17.6
30°-40°	150.8	19.1
40°-50°	138.6	17.6
50°-60°	108.7	13.8
60°-70°	70.9	9.0
70°-80°	36.7	4.7
80°-90°	9.5	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°	273.1	34.6
0°-40°	423.8	53.8
0°-60°	671.1	85.1
0°-90°	788.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	788.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	384	384	384	384	384	
5°	384	382	378	381	380	36
15°	366	362	349	342	339	103
25°	331	320	298	283	277	153
35°	286	268	236	215	205	179
45°	234	210	173	148	139	181
55°	177	151	113	92	85	159
65°	121	92	60	49	47	119
75°	63	40	28	26	25	68
85°	16	8	7	7	7	18
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	384.4	384.4	384.4	384.4	384.4
2.5°	386.0	384.4	380.4	384.0	383.4
5°	384.4	382.4	378.1	380.7	379.7
7.5°	381.4	379.4	373.7	375.1	373.4
10°	377.4	374.7	367.1	365.8	363.8
12.5°	372.4	368.8	358.5	354.5	351.9
15°	365.8	361.5	348.9	341.9	339.3
17.5°	358.5	352.2	336.6	328.6	326.0
20°	350.2	342.9	323.3	315.1	309.7
22.5°	341.6	332.3	312.1	299.1	292.8
25°	331.3	319.7	297.8	283.2	276.6
27.5°	321.4	307.8	282.9	266.0	258.7
30°	310.1	295.2	267.6	248.1	241.1
32.5°	298.8	281.6	252.7	231.5	223.5
35°	286.5	267.6	236.5	214.6	205.3
37.5°	273.9	254.4	221.5	197.3	188.4
40°	261.0	239.1	204.9	179.7	171.1
42.5°	247.7	225.5	189.4	163.5	155.2
45°	234.1	210.3	173.4	148.2	139.0
47.5°	221.2	195.3	157.2	133.3	124.4
50°	205.9	180.4	141.9	117.7	110.8
52.5°	192.0	165.5	127.0	103.8	97.8
55°	177.4	150.9	112.8	91.5	85.2
57.5°	163.8	135.6	98.5	79.3	73.3
60°	149.6	121.0	84.6	67.0	60.7
62.5°	134.6	106.1	72.3	55.7	53.7
65°	120.7	91.5	60.4	49.1	47.4
67.5°	105.8	77.9	48.1	43.1	41.5
70°	91.9	64.7	40.5	36.8	35.8
72.5°	78.3	52.1	34.2	31.2	30.2
75°	63.3	39.5	27.9	25.5	24.9
77.5°	50.4	27.9	22.2	20.6	19.9
80°	38.1	20.2	16.6	15.6	14.9
82.5°	26.2	13.6	11.6	10.9	10.6
85°	15.9	7.6	7.0	6.6	6.6
87.5°	6.3	3.0	3.0	2.7	2.7
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	18.16	19.68	18.53	20.00	20.31	14.05	15.57	14.42	15.89	16.20
	3H	19.93	21.29	20.31	21.62	21.98	15.35	16.71	15.72	17.04	17.40
	4H	20.59	21.87	20.99	22.22	22.60	15.85	17.13	16.25	17.48	17.86
	6H	21.08	22.26	21.49	22.63	23.02	16.23	17.42	16.65	17.78	18.18
	8H	21.24	22.37	21.67	22.76	23.16	16.36	17.48	16.78	17.87	18.27
	12H	21.35	22.43	21.78	22.82	23.24	16.44	17.52	16.87	17.90	18.33
4H	2H	18.26	19.54	18.66	19.89	20.27	14.76	16.04	15.16	16.39	16.77
	3H	20.20	21.27	20.61	21.67	22.07	16.23	17.29	16.64	17.69	18.09
	4H	20.95	21.90	21.38	22.32	22.76	16.84	17.79	17.27	18.21	18.65
	6H	21.54	22.37	22.00	22.81	23.27	17.33	18.16	17.79	18.60	19.06
	8H	21.75	22.53	22.21	22.97	23.44	17.49	18.27	17.95	18.71	19.18
	12H	21.91	22.61	22.40	23.09	23.56	17.60	18.30	18.09	18.78	19.25
8H	4H	20.97	21.75	21.44	22.19	22.66	17.20	17.98	17.66	18.42	18.89
	6H	21.61	22.25	22.11	22.74	23.22	17.79	18.43	18.29	18.92	19.40
	8H	21.86	22.44	22.37	22.94	23.43	18.01	18.59	18.53	19.10	19.59
	12H	22.07	22.58	22.58	23.07	23.64	18.19	18.70	18.70	19.19	19.76
12H	4H	20.96	21.65	21.44	22.13	22.60	17.24	17.94	17.72	18.41	18.88
	6H	21.59	22.17	22.10	22.68	23.17	17.85	18.43	18.37	18.94	19.43
	8H	21.87	22.38	22.38	22.88	23.44	18.13	18.64	18.64	19.13	19.70