

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: P242377

Luminaire Tested: S122RDRP-S290D935-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242377
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-24)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122RDRP-S290D935-X4F0-XX-UDD-F-W
Description: DEFINE 2 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

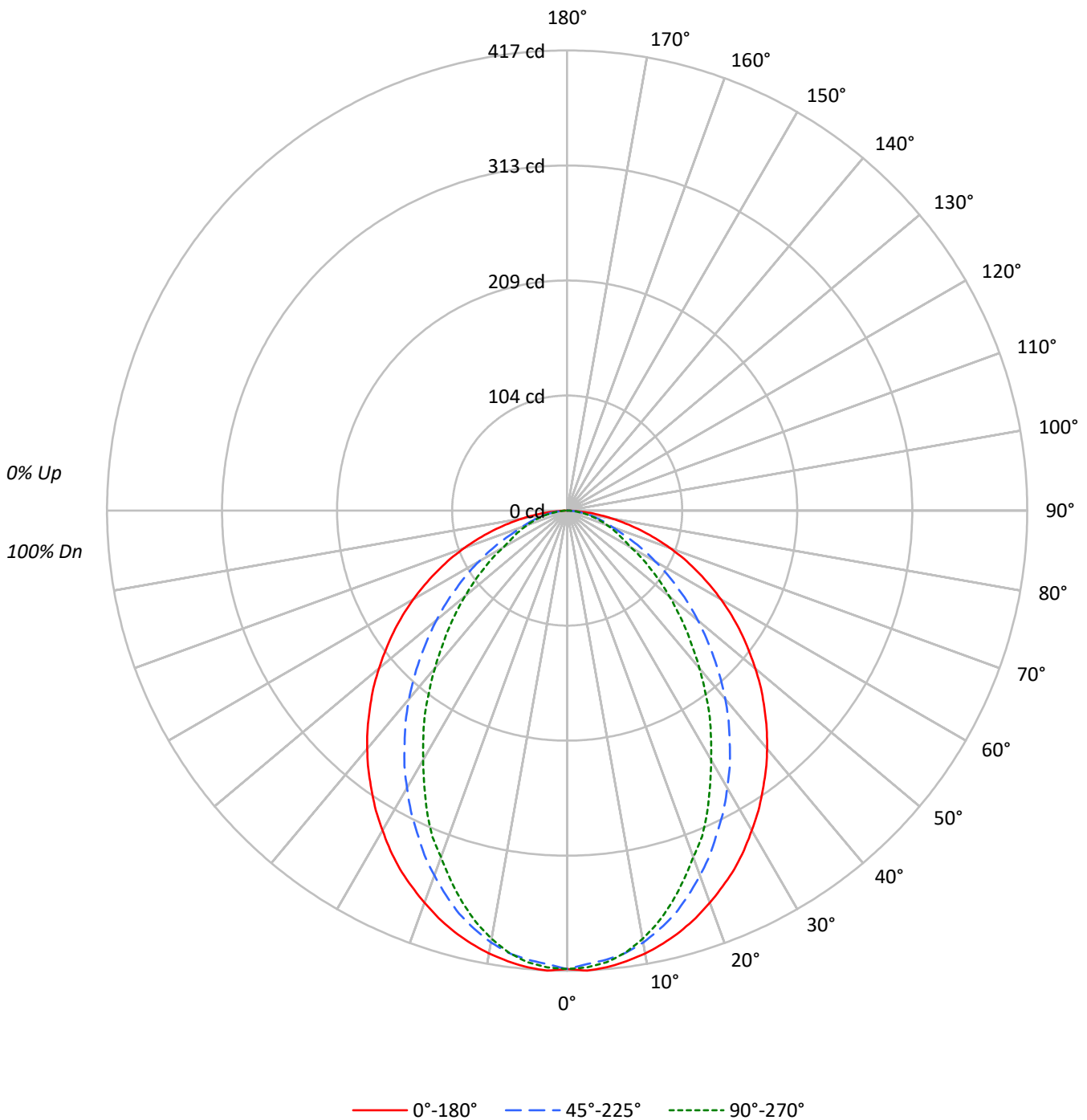
Lumens per Lamp: N/A
Luminaire Lumens: 854.3 lumens
Efficiency: N/A
Efficacy: 73.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 0.15' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 11.6
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	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	78	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°	7912	7912	7912
5°	7943	7813	7857
10°	7882	7686	7621
15°	7791	7458	7243
20°	7666	7133	6774
25°	7537	6763	6320
30°	7359	6383	5738
35°	7185	5971	5227
40°	7009	5542	4637
45°	6804	5064	4103
50°	6596	4578	3577
55°	6379	4058	3072
60°	6130	3509	2549
65°	5846	2948	2321
70°	5508	2428	2133
75°	5093	2215	1994
80°	4497	1974	1810
85°	3540	1552	1552

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6804 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	38.9	4.6
10°-20°	106.9	12.5
20°-30°	150.1	17.6
30°-40°	163.6	19.1
40°-50°	150.3	17.6
50°-60°	118.1	13.8
60°-70°	76.8	9.0
70°-80°	39.6	4.6
80°-90°	10.1	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°	295.9	34.6
0°-40°	459.4	53.8
0°-60°	727.8	85.2
0°-90°	854.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	854.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	415	415	415	415	415	
5°	415	414	409	412	411	39
15°	395	391	378	371	367	111
25°	359	347	322	306	301	165
35°	309	290	257	233	225	193
45°	253	227	188	161	152	195
55°	192	163	122	100	92	172
65°	130	99	65	53	52	129
75°	69	43	30	27	27	73
85°	16	8	7	7	7	19
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	415.4	415.4	415.4	415.4	415.4
2.5°	417.3	415.4	411.3	415.0	414.3
5°	415.4	413.5	408.6	412.0	410.9
7.5°	412.0	409.8	404.5	406.0	404.1
10°	407.5	404.9	397.4	396.2	394.0
12.5°	401.9	398.5	388.3	386.1	381.9
15°	395.1	391.0	378.2	371.0	367.3
17.5°	387.2	381.2	365.4	357.1	351.1
20°	378.2	370.7	351.9	342.5	334.2
22.5°	368.4	359.8	338.0	325.2	319.5
25°	358.6	346.6	321.8	306.4	300.7
27.5°	347.0	334.2	306.8	289.1	280.4
30°	334.6	320.3	290.2	271.0	260.9
32.5°	322.5	305.3	274.4	251.9	242.5
35°	309.0	289.8	256.8	233.1	224.8
37.5°	295.9	275.2	240.2	214.3	204.9
40°	281.9	259.4	222.9	196.2	186.5
42.5°	267.7	243.6	205.6	177.8	168.4
45°	252.6	227.4	188.0	161.3	152.3
47.5°	238.3	211.6	171.0	144.4	136.1
50°	222.6	195.9	154.5	128.6	120.7
52.5°	207.1	178.9	138.7	113.9	106.8
55°	192.1	162.8	122.2	99.6	92.5
57.5°	176.7	146.6	107.5	86.5	80.4
60°	160.9	130.8	92.1	72.9	66.9
62.5°	145.5	115.4	78.9	60.9	57.9
65°	129.7	99.2	65.4	52.6	51.5
67.5°	114.7	84.2	52.6	46.2	45.1
70°	98.9	69.5	43.6	39.8	38.3
72.5°	83.8	56.0	36.5	33.5	32.7
75°	69.2	42.9	30.1	27.4	27.1
77.5°	54.5	30.5	23.7	22.2	21.4
80°	41.0	21.8	18.0	16.5	16.5
82.5°	28.6	14.7	12.4	11.7	11.7
85°	16.2	8.3	7.1	7.1	7.1
87.5°	6.0	3.0	3.0	2.6	2.6
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	18.42	19.94	18.79	20.26	20.57	14.38	15.90	14.75	16.22	16.53
	3H	20.19	21.55	20.56	21.88	22.24	15.65	17.01	16.02	17.34	17.70
	4H	20.85	22.13	21.25	22.48	22.86	16.15	17.43	16.55	17.78	18.16
	6H	21.34	22.53	21.75	22.89	23.28	16.53	17.71	16.94	18.08	18.47
	8H	21.51	22.63	21.93	23.02	23.43	16.65	17.78	17.08	18.17	18.57
	12H	21.61	22.69	22.04	23.07	23.50	16.73	17.81	17.16	18.19	18.62
4H	2H	18.52	19.81	18.92	20.15	20.53	15.08	16.36	15.48	16.71	17.09
	3H	20.46	21.52	20.87	21.92	22.32	16.52	17.58	16.93	17.98	18.38
	4H	21.21	22.17	21.64	22.58	23.02	17.12	18.08	17.55	18.49	18.93
	6H	21.80	22.63	22.26	23.08	23.53	17.61	18.44	18.06	18.88	19.34
	8H	22.02	22.79	22.48	23.24	23.70	17.77	18.55	18.23	18.99	19.46
	12H	22.17	22.86	22.65	23.34	23.81	17.89	18.58	18.37	19.06	19.53
8H	4H	21.23	22.01	21.70	22.45	22.92	17.47	18.25	17.94	18.69	19.16
	6H	21.87	22.51	22.37	23.00	23.48	18.06	18.70	18.55	19.19	19.67
	8H	22.12	22.70	22.64	23.21	23.70	18.28	18.86	18.79	19.37	19.86
	12H	22.33	22.84	22.84	23.33	23.89	18.46	18.97	18.97	19.46	20.03
12H	4H	21.22	21.91	21.70	22.39	22.86	17.52	18.21	18.00	18.69	19.16
	6H	21.85	22.43	22.37	22.94	23.43	18.12	18.70	18.64	19.21	19.70
	8H	22.14	22.65	22.65	23.14	23.70	18.40	18.91	18.91	19.40	19.96