

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: P242356

Luminaire Tested: S122RDRP-S865D927-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242356
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-S865D927-X4F0-XX-UDD-F-W
Description: DEFINE 2 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

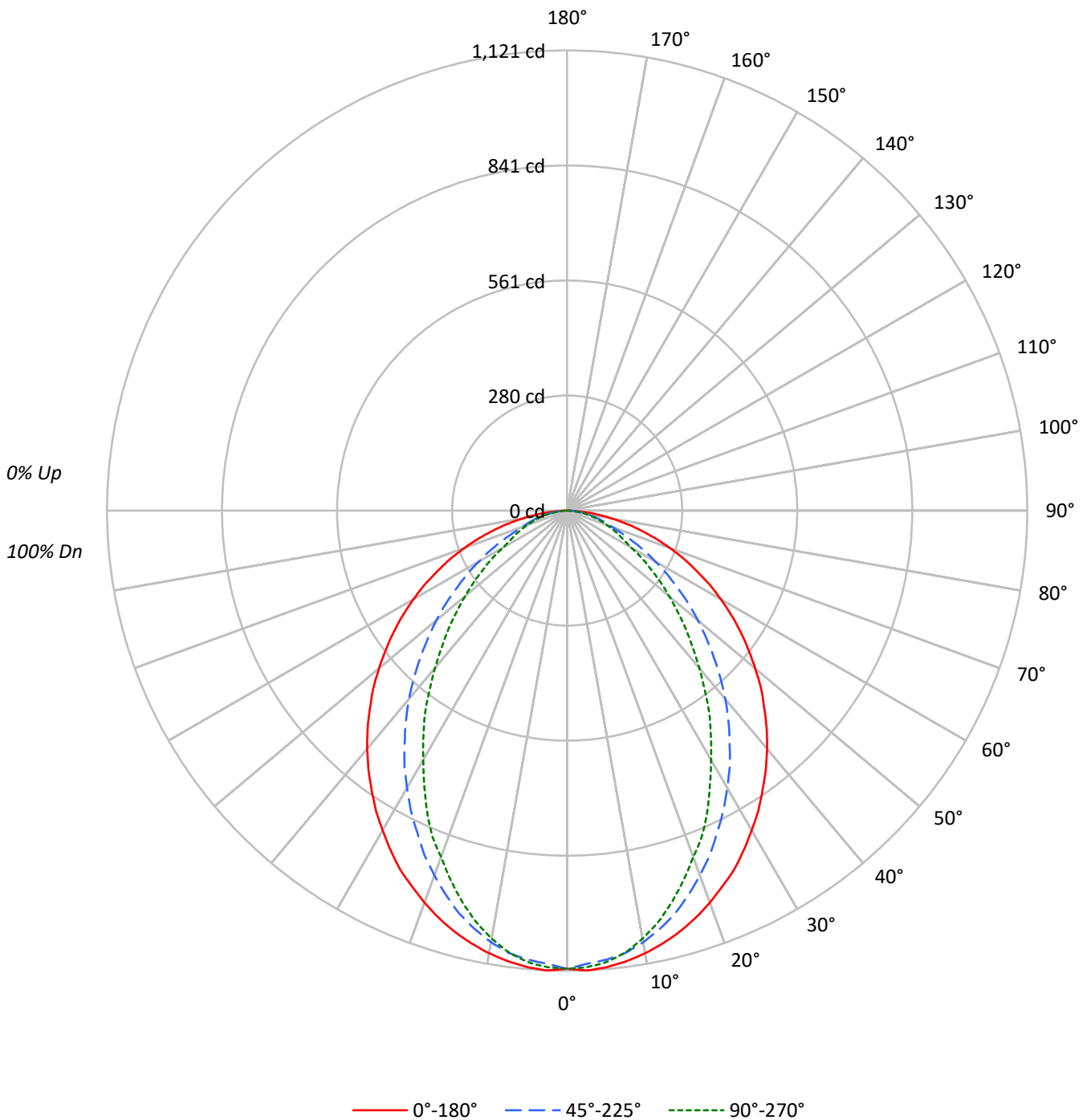
Lumens per Lamp: N/A
Luminaire Lumens: 2295.8 lumens
Efficiency: N/A
Efficacy: 66.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 0.15' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 34.8
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	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°	21263	21263	21263
5°	21344	20996	21113
10°	21181	20653	20477
15°	20936	20041	19463
20°	20601	19167	18205
25°	20256	18175	16986
30°	19775	17153	15420
35°	19309	16045	14047
40°	18840	14897	12460
45°	18288	13606	11020
50°	17723	12304	9610
55°	17142	10902	8252
60°	16472	9429	6850
65°	15707	7923	6238
70°	14797	6527	5736
75°	13681	5946	5350
80°	12077	5320	4870
85°	9485	4196	4196

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 18288 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	104.6	4.6
10°-20°	287.2	12.5
20°-30°	403.2	17.6
30°-40°	439.5	19.1
40°-50°	404.0	17.6
50°-60°	317.3	13.8
60°-70°	206.5	9.0
70°-80°	106.3	4.6
80°-90°	27.1	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°	795.1	34.6
0°-40°	1234.6	53.8
0°-60°	1955.8	85.2
0°-90°	2295.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2295.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1116	1116	1116	1116	1116	
5°	1116	1111	1098	1107	1104	106
15°	1062	1051	1016	997	987	299
25°	964	931	865	823	808	443
35°	830	779	690	626	604	520
45°	679	611	505	433	409	524
55°	516	437	328	268	248	461
65°	348	267	176	141	138	346
75°	186	115	81	74	73	197
85°	43	22	19	19	19	52
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1116.3	1116.3	1116.3	1116.3	1116.3
2.5°	1121.4	1116.3	1105.2	1115.3	1113.3
5°	1116.3	1111.2	1098.1	1107.2	1104.2
7.5°	1107.2	1101.1	1087.0	1091.0	1086.0
10°	1095.1	1088.0	1067.8	1064.8	1058.7
12.5°	1079.9	1070.8	1043.6	1037.5	1026.4
15°	1061.7	1050.6	1016.3	997.1	987.0
17.5°	1040.5	1024.4	981.9	959.7	943.6
20°	1016.3	996.1	945.6	920.3	898.1
22.5°	990.0	966.8	908.2	873.8	858.7
25°	963.8	931.4	864.8	823.3	808.2
27.5°	932.4	898.1	824.3	776.9	753.6
30°	899.1	860.7	779.9	728.4	701.1
32.5°	866.8	820.3	737.5	676.9	651.6
35°	830.4	778.9	690.0	626.3	604.1
37.5°	795.0	739.5	645.5	575.8	550.6
40°	757.7	697.1	599.1	527.3	501.1
42.5°	719.3	654.6	552.6	477.8	452.6
45°	678.9	611.2	505.1	433.4	409.1
47.5°	640.5	568.8	459.7	387.9	365.7
50°	598.1	526.3	415.2	345.5	324.3
52.5°	556.6	480.9	372.8	306.1	286.9
55°	516.2	437.4	328.3	267.7	248.5
57.5°	474.8	394.0	288.9	232.4	216.2
60°	432.4	351.6	247.5	196.0	179.8
62.5°	391.0	310.1	212.1	163.7	155.6
65°	348.5	266.7	175.8	141.4	138.4
67.5°	308.1	226.3	141.4	124.3	121.2
70°	265.7	186.9	117.2	107.1	103.0
72.5°	225.3	150.5	98.0	89.9	87.9
75°	185.9	115.2	80.8	73.7	72.7
77.5°	146.5	81.8	63.6	59.6	57.6
80°	110.1	58.6	48.5	44.4	44.4
82.5°	76.8	39.4	33.3	31.3	31.3
85°	43.4	22.2	19.2	19.2	19.2
87.5°	16.2	8.1	8.1	7.1	7.1
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	21.86	23.38	22.22	23.69	24.01	17.82	19.34	18.18	19.65	19.97
	3H	23.62	24.99	24.00	25.31	25.68	19.08	20.45	19.46	20.78	21.14
	4H	24.29	25.57	24.69	25.92	26.30	19.58	20.86	19.98	21.21	21.59
	6H	24.78	25.96	25.19	26.33	26.72	19.96	21.15	20.38	21.51	21.91
	8H	24.94	26.07	25.37	26.46	26.86	20.09	21.21	20.51	21.60	22.01
	12H	25.05	26.12	25.48	26.51	26.93	20.17	21.25	20.60	21.63	22.06
4H	2H	21.96	23.24	22.36	23.59	23.97	18.51	19.79	18.91	20.14	20.52
	3H	23.89	24.96	24.30	25.36	25.76	19.96	21.02	20.37	21.42	21.82
	4H	24.64	25.60	25.08	26.02	26.45	20.55	21.51	20.99	21.93	22.37
	6H	25.23	26.07	25.69	26.51	26.97	21.04	21.87	21.50	22.32	22.78
	8H	25.45	26.23	25.91	26.67	27.14	21.20	21.98	21.67	22.43	22.89
	12H	25.60	26.30	26.08	26.78	27.25	21.32	22.02	21.80	22.49	22.97
8H	4H	24.67	25.44	25.13	25.89	26.36	20.91	21.69	21.37	22.13	22.60
	6H	25.30	25.95	25.80	26.44	26.92	21.49	22.14	21.99	22.63	23.11
	8H	25.55	26.13	26.07	26.64	27.13	21.71	22.29	22.23	22.80	23.29
	12H	25.76	26.27	26.27	26.76	27.33	21.89	22.40	22.40	22.90	23.46
12H	4H	24.65	25.35	25.13	25.82	26.30	20.95	21.65	21.43	22.12	22.60
	6H	25.29	25.86	25.80	26.37	26.86	21.56	22.14	22.07	22.64	23.13
	8H	25.57	26.08	26.08	26.57	27.14	21.83	22.34	22.34	22.83	23.40