

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: P242371

Luminaire Tested: S122RDRP-S1005D840-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242371
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-S1005D840-X4F0-XX-UDD-F-W
Description: DEFINE 2 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

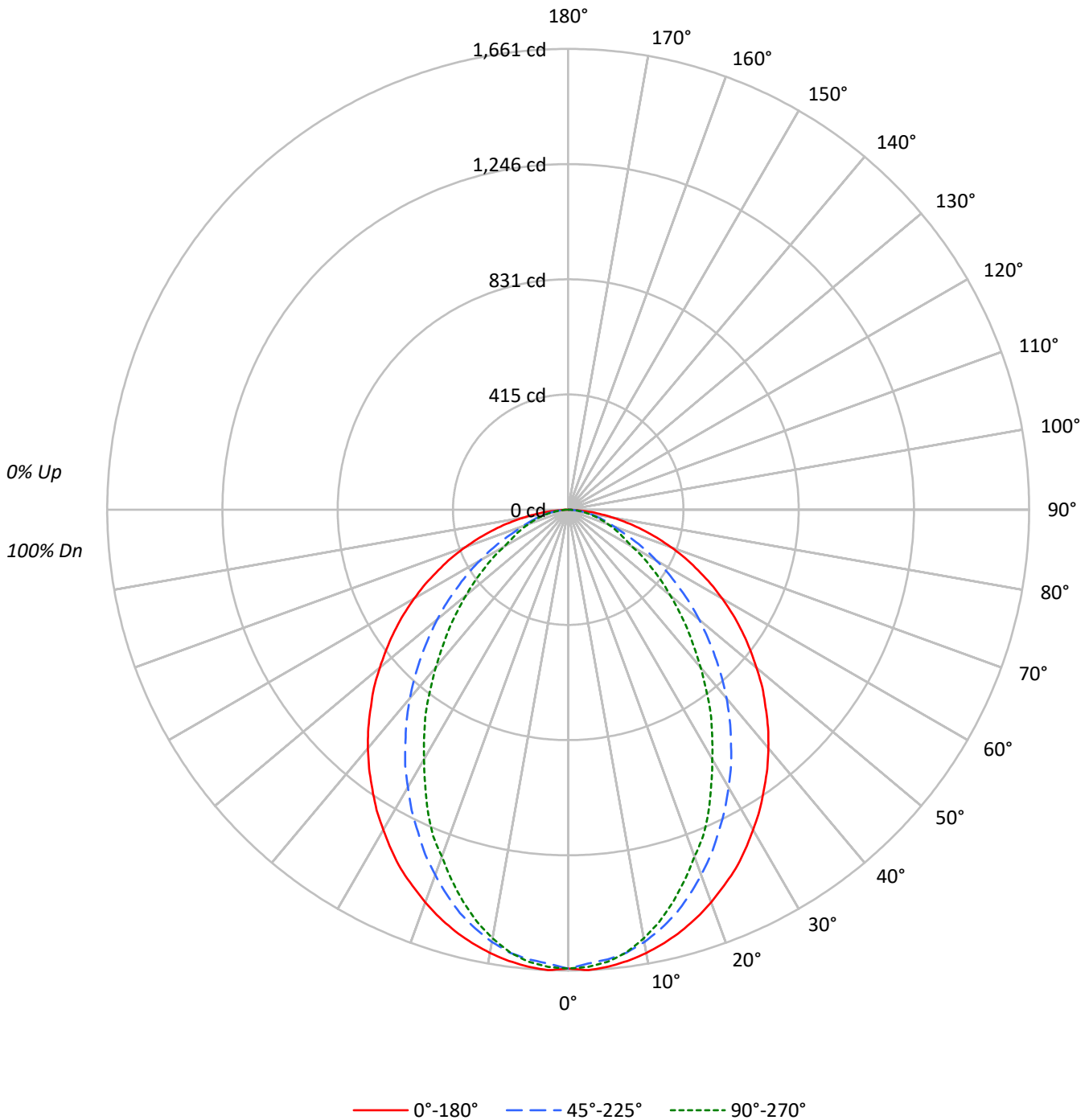
Lumens per Lamp: N/A
Luminaire Lumens: 3401.3 lumens
Efficiency: N/A
Efficacy: 82.8 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 0.15' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 41.1
Input Voltage (V): 120
Input Current (Ain): 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	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					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°	31501	31501	31501
5°	31621	31107	31279
10°	31380	30598	30337
15°	31019	29692	28836
20°	30521	28396	26971
25°	30008	26927	25166
30°	29299	25412	22846
35°	28608	23769	20811
40°	27911	22068	18460
45°	27094	20157	16330
50°	26255	18227	14236
55°	25398	16153	12227
60°	24404	13970	10149
65°	23275	11736	9239
70°	21920	9668	8504
75°	20268	8809	7934
80°	17891	7876	7229
85°	14074	6207	6207

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 27094 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	155.0	4.6
10°-20°	425.5	12.5
20°-30°	597.4	17.6
30°-40°	651.2	19.1
40°-50°	598.5	17.6
50°-60°	470.0	13.8
60°-70°	305.9	9.0
70°-80°	157.5	4.6
80°-90°	40.2	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°	1177.9	34.6
0°-40°	1829.1	53.8
0°-60°	2897.7	85.2
0°-90°	3401.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3401.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1654	1654	1654	1654	1654	
5°	1654	1646	1627	1640	1636	157
15°	1573	1557	1506	1477	1462	443
25°	1428	1380	1281	1220	1197	657
35°	1230	1154	1022	928	895	770
45°	1006	906	748	642	606	777
55°	765	648	486	397	368	683
65°	516	395	260	210	205	512
75°	275	171	120	109	108	291
85°	64	33	28	28	28	77
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1653.8	1653.8	1653.8	1653.8	1653.8
2.5°	1661.3	1653.8	1637.4	1652.4	1649.4
5°	1653.8	1646.4	1626.9	1640.4	1635.9
7.5°	1640.4	1631.4	1610.4	1616.4	1608.9
10°	1622.4	1611.9	1582.0	1577.5	1568.5
12.5°	1600.0	1586.5	1546.1	1537.1	1520.6
15°	1573.0	1556.6	1505.7	1477.2	1462.3
17.5°	1541.6	1517.6	1454.8	1421.9	1397.9
20°	1505.7	1475.7	1400.9	1363.5	1330.6
22.5°	1466.8	1432.3	1345.5	1294.6	1272.2
25°	1427.8	1380.0	1281.2	1219.8	1197.4
27.5°	1381.4	1330.6	1221.3	1151.0	1116.5
30°	1332.1	1275.2	1155.4	1079.1	1038.7
32.5°	1284.2	1215.3	1092.6	1002.8	965.4
35°	1230.3	1154.0	1022.2	928.0	895.0
37.5°	1177.9	1095.6	956.4	853.1	815.7
40°	1122.5	1032.7	887.5	781.3	742.4
42.5°	1065.6	969.9	818.7	707.9	670.5
45°	1005.8	905.5	748.3	642.1	606.2
47.5°	948.9	842.6	681.0	574.7	541.8
50°	886.0	779.8	615.1	511.9	480.4
52.5°	824.7	712.4	552.3	453.5	425.1
55°	764.8	648.1	486.4	396.6	368.2
57.5°	703.4	583.7	428.1	344.2	320.3
60°	640.6	520.8	366.7	290.4	266.4
62.5°	579.2	459.5	314.3	242.5	230.5
65°	516.4	395.1	260.4	209.5	205.0
67.5°	456.5	335.3	209.5	184.1	179.6
70°	393.6	276.9	173.6	158.6	152.7
72.5°	333.8	223.0	145.2	133.2	130.2
75°	275.4	170.6	119.7	109.3	107.8
77.5°	217.0	121.2	94.3	88.3	85.3
80°	163.1	86.8	71.8	65.9	65.9
82.5°	113.7	58.4	49.4	46.4	46.4
85°	64.4	32.9	28.4	28.4	28.4
87.5°	23.9	12.0	12.0	10.5	10.5
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	23.22	24.74	23.59	25.06	25.37	19.18	20.70	19.55	21.02	21.33
	3H	24.99	26.35	25.36	26.68	27.04	20.45	21.81	20.82	22.14	22.50
	4H	25.65	26.93	26.05	27.28	27.66	20.95	22.23	21.35	22.58	22.96
	6H	26.14	27.32	26.55	27.69	28.08	21.33	22.51	21.74	22.88	23.27
	8H	26.31	27.43	26.73	27.82	28.22	21.45	22.58	21.88	22.97	23.37
	12H	26.41	27.49	26.84	27.87	28.30	21.54	22.61	21.97	23.00	23.43
4H	2H	23.32	24.61	23.72	24.95	25.33	19.88	21.16	20.28	21.51	21.88
	3H	25.26	26.32	25.67	26.72	27.12	21.32	22.38	21.73	22.78	23.18
	4H	26.01	26.96	26.44	27.38	27.82	21.92	22.88	22.35	23.29	23.73
	6H	26.60	27.43	27.06	27.87	28.33	22.41	23.24	22.87	23.68	24.14
	8H	26.81	27.59	27.28	28.04	28.50	22.57	23.35	23.03	23.79	24.26
	12H	26.97	27.66	27.45	28.14	28.61	22.69	23.38	23.17	23.86	24.33
8H	4H	26.03	26.81	26.50	27.25	27.72	22.27	23.05	22.74	23.50	23.96
	6H	26.67	27.31	27.17	27.80	28.28	22.86	23.50	23.36	23.99	24.47
	8H	26.92	27.50	27.43	28.01	28.49	23.08	23.66	23.60	24.17	24.66
	12H	27.12	27.63	27.63	28.13	28.69	23.26	23.77	23.77	24.26	24.83
12H	4H	26.02	26.71	26.50	27.19	27.66	22.32	23.01	22.80	23.49	23.96
	6H	26.65	27.23	27.16	27.74	28.23	22.92	23.50	23.44	24.01	24.50
	8H	26.93	27.44	27.44	27.94	28.50	23.20	23.71	23.71	24.20	24.76