

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: P242542

Luminaire Tested: S123RDRP-S1000D840-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242542
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-25)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDRP-S1000D840-X4F0-XX-UDD-F-W
Description: DEFINE 3 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

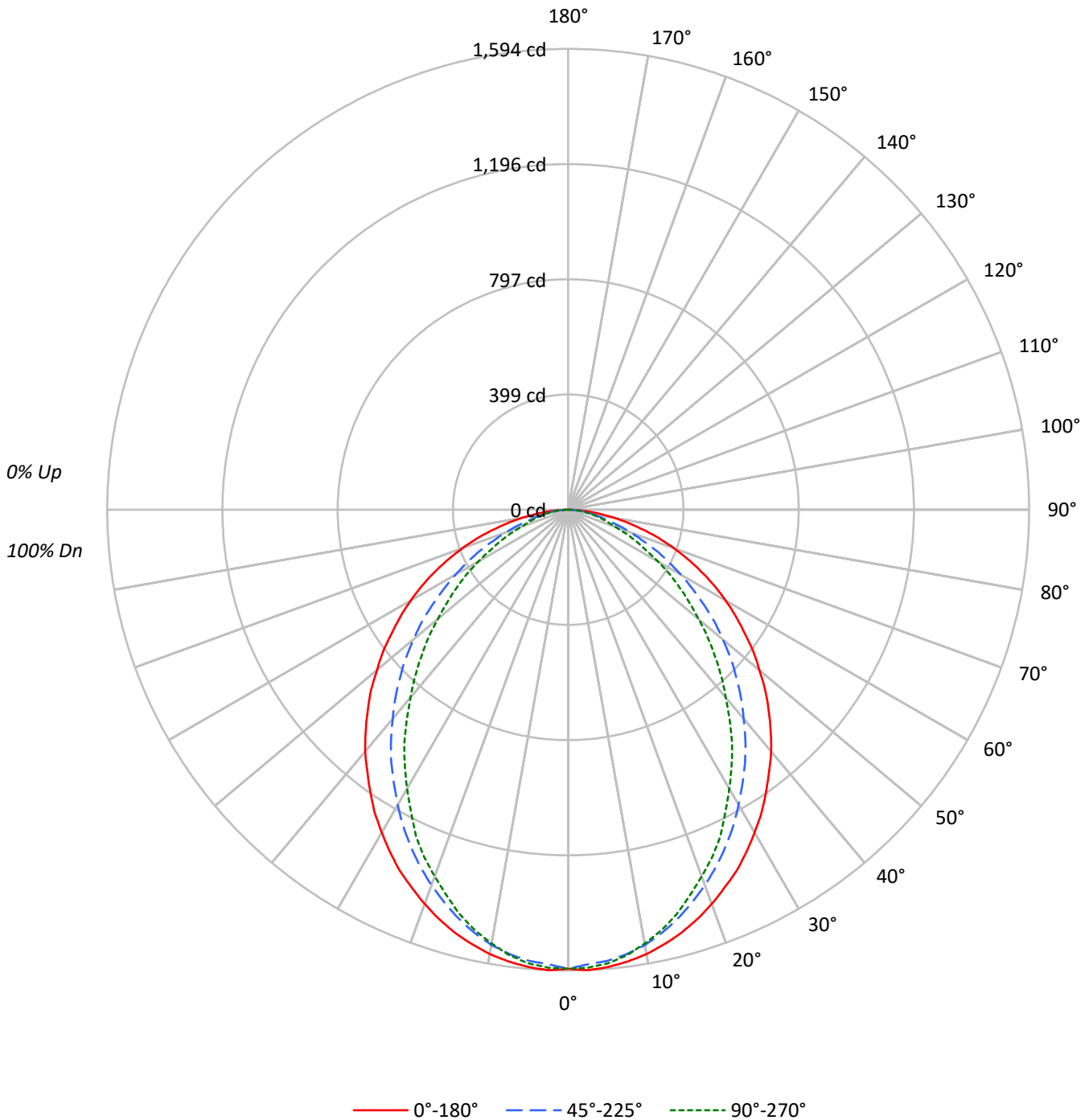
Lumens per Lamp: N/A
Luminaire Lumens: 3587.3 lumens
Efficiency: N/A
Efficacy: 103.1 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.07 / 1.22
Luminous Opening: Rectangular (W 0.23' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 34.8
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	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	105	101	98	107	103	99	96	99	96	93	95	93	90	91	89	88	86													86															
2	100	93	86	81	98	91	85	80	87	83	78	84	80	77	81	78	75	73													73															
3	92	82	75	68	90	81	74	68	78	72	67	75	70	66	73	68	64	62													62															
4	85	73	65	59	83	72	64	58	70	63	58	67	62	57	65	60	56	54													54															
5	78	66	57	51	76	65	57	51	63	56	50	61	55	50	59	54	49	47													47															
6	73	60	51	45	71	59	51	45	57	50	45	55	49	44	54	48	44	42													42															
7	67	54	46	40	66	54	46	40	52	45	40	51	44	39	49	44	39	37													37															
8	63	50	42	36	61	49	41	36	48	41	36	47	40	36	46	40	35	34													34															
9	59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32	30													30															
10	55	43	35	30	54	42	35	30	41	34	30	40	34	29	39	34	29	28													28															

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	19247	19247	19247
5°	19321	19054	19164
10°	19211	18816	18752
15°	19005	18375	18181
20°	18722	17824	17409
25°	18430	17206	16655
30°	18043	16493	15592
35°	17646	15778	14617
40°	17280	14937	13409
45°	16799	14106	12318
50°	16270	13162	11098
55°	15731	12084	9960
60°	15236	10926	8710
65°	14590	9677	7460
70°	13783	8123	6025
75°	12607	6393	5671
80°	11238	5661	5214
85°	9499	5021	4659

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 16799 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	149.3	4.2
10°-20°	415.3	11.6
20°-30°	597.9	16.7
30°-40°	673.3	18.8
40°-50°	644.0	18.0
50°-60°	527.2	14.7
60°-70°	355.5	9.9
70°-80°	178.3	5.0
80°-90°	46.6	1.3
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°	1162.4	32.4
0°-40°	1835.7	51.2
0°-60°	3007.0	83.8
0°-90°	3587.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3587.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1588	1588	1588	1588	1588	
5°	1588	1582	1566	1578	1575	151
15°	1514	1500	1464	1458	1449	427
25°	1378	1346	1286	1260	1245	634
35°	1192	1146	1066	1011	988	746
45°	980	922	823	750	719	756
55°	744	681	572	497	471	668
65°	509	438	337	274	260	503
75°	269	207	136	124	121	287
85°	68	40	36	34	34	79
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1587.9	1587.9	1587.9	1587.9	1587.9
2.5°	1594.3	1589.2	1573.7	1587.9	1585.3
5°	1587.9	1581.5	1566.0	1577.6	1575.0
7.5°	1576.3	1569.9	1550.5	1558.3	1554.4
10°	1560.8	1551.8	1528.7	1529.9	1523.5
12.5°	1539.0	1528.7	1499.0	1497.7	1490.0
15°	1514.5	1500.3	1464.3	1457.8	1448.8
17.5°	1484.9	1469.4	1424.3	1411.5	1398.6
20°	1451.4	1430.8	1381.8	1365.1	1349.6
22.5°	1414.0	1389.6	1336.8	1314.9	1300.7
25°	1378.0	1345.8	1286.5	1259.5	1245.3
27.5°	1334.2	1299.4	1235.0	1199.0	1177.1
30°	1289.1	1250.5	1178.4	1134.6	1114.0
32.5°	1244.0	1199.0	1121.7	1072.8	1050.9
35°	1192.5	1146.2	1066.3	1010.9	987.8
37.5°	1141.0	1090.8	1007.1	945.3	916.9
40°	1092.1	1035.4	944.0	877.0	847.4
42.5°	1036.7	980.0	884.7	810.0	784.3
45°	980.0	922.1	822.9	749.5	718.6
47.5°	924.7	860.3	762.4	682.5	655.5
50°	862.8	802.3	698.0	618.2	588.5
52.5°	807.5	740.5	637.5	553.8	528.0
55°	744.4	681.3	571.8	497.1	471.3
57.5°	687.7	619.4	508.7	437.9	416.0
60°	628.5	557.6	450.7	381.2	359.3
62.5°	569.2	498.4	391.5	327.1	303.9
65°	508.7	437.9	337.4	274.3	260.1
67.5°	448.2	376.0	278.2	230.5	215.1
70°	388.9	319.4	229.2	184.2	170.0
72.5°	329.7	261.4	181.6	146.8	142.9
75°	269.2	207.3	136.5	123.6	121.1
77.5°	213.8	157.1	106.9	99.2	96.6
80°	161.0	108.2	81.1	77.3	74.7
82.5°	110.8	67.0	58.0	54.1	54.1
85°	68.3	39.9	36.1	33.5	33.5
87.5°	30.9	16.7	16.7	15.5	14.2
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	21.72	23.28	22.09	23.59	23.91	19.09	20.65	19.46	20.96	21.28
	3H	23.50	24.90	23.88	25.23	25.59	20.21	21.60	20.58	21.93	22.29
	4H	24.16	25.47	24.56	25.82	26.20	20.60	21.91	21.00	22.26	22.64
	6H	24.64	25.85	25.05	26.22	26.61	20.92	22.13	21.33	22.50	22.89
	8H	24.79	25.95	25.22	26.34	26.74	21.03	22.19	21.46	22.58	22.98
	12H	24.89	26.00	25.32	26.38	26.81	21.10	22.21	21.53	22.59	23.02
4H	2H	21.98	23.29	22.38	23.64	24.02	19.81	21.12	20.21	21.47	21.85
	3H	23.94	25.04	24.35	25.43	25.84	21.08	22.18	21.49	22.57	22.98
	4H	24.71	25.70	25.15	26.11	26.55	21.56	22.55	22.00	22.96	23.40
	6H	25.31	26.17	25.77	26.61	27.07	21.98	22.84	22.44	23.28	23.74
	8H	25.50	26.30	25.97	26.75	27.21	22.13	22.93	22.59	23.37	23.84
	12H	25.65	26.37	26.13	26.84	27.31	22.24	22.96	22.72	23.43	23.90
8H	4H	24.77	25.57	25.23	26.01	26.48	21.89	22.69	22.35	23.13	23.60
	6H	25.43	26.09	25.93	26.58	27.06	22.40	23.06	22.89	23.55	24.03
	8H	25.67	26.26	26.18	26.77	27.26	22.60	23.20	23.12	23.71	24.19
	12H	25.87	26.39	26.38	26.88	27.45	22.77	23.30	23.28	23.79	24.35
12H	4H	24.76	25.48	25.24	25.95	26.42	21.93	22.65	22.41	23.12	23.59
	6H	25.42	26.01	25.93	26.52	27.01	22.46	23.05	22.97	23.56	24.05
	8H	25.69	26.22	26.20	26.71	27.27	22.72	23.24	23.22	23.73	24.30