

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: P243585

Luminaire Tested: S124RDRP-H1195D935-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243585
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-65)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124RDRP-H1195D935-X4F0-XX-UDD-F-W
Description: DEFINE 4 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

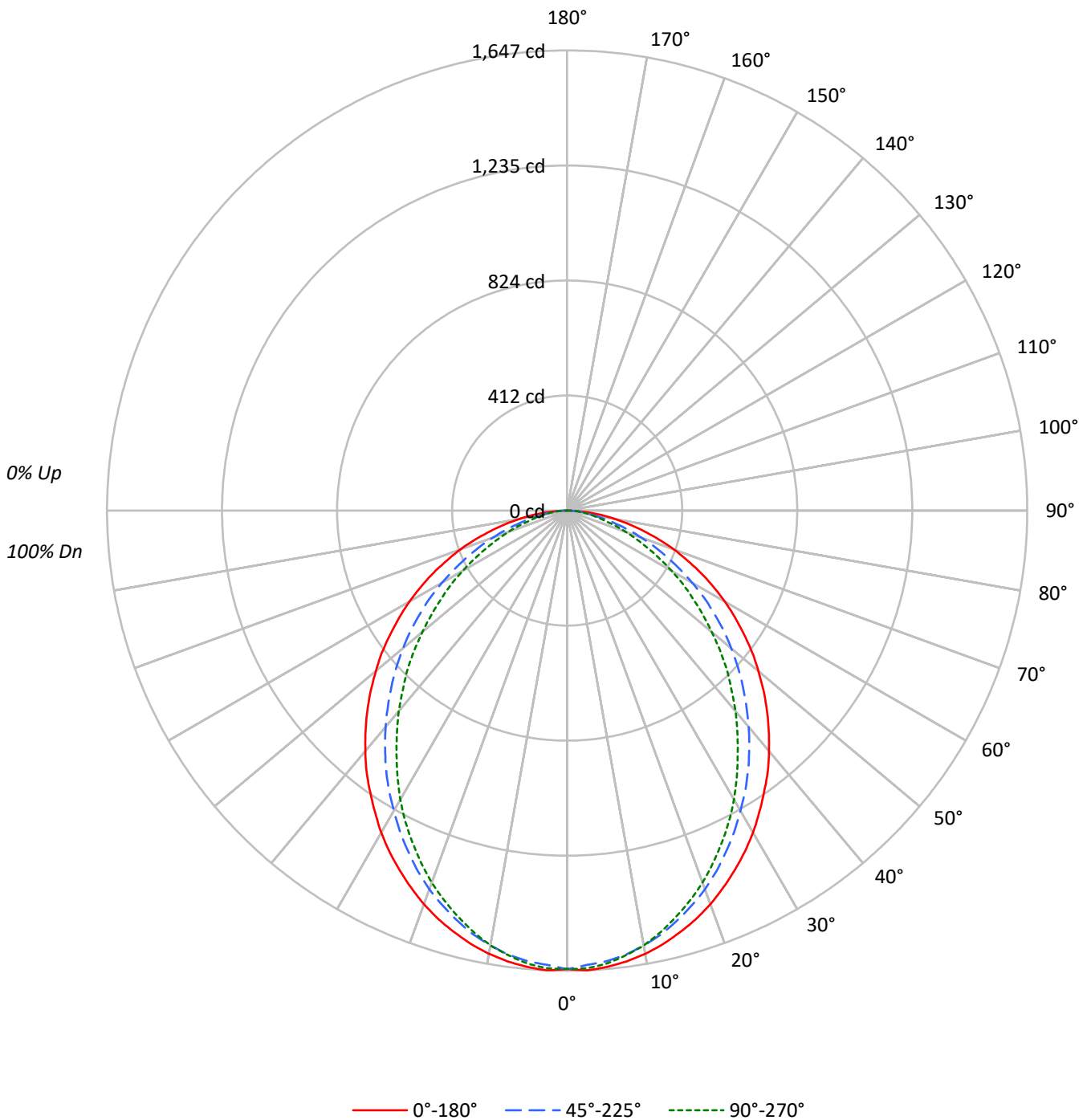
Lumens per Lamp: N/A
Luminaire Lumens: 3869.7 lumens
Efficiency: N/A
Efficacy: 102.6 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.1 / 1.25
Luminous Opening: Rectangular (W 0.31' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 37.7
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																		
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																												
1	109	105	101	97	107	103	99	96	98	95	93	95	92	90	91	89	87	85																												
2	100	92	86	80	97	90	84	79	87	82	78	84	79	76	81	77	74	72																												
3	92	82	74	68	89	80	73	67	77	71	66	74	69	65	72	67	64	61																												
4	84	73	64	58	82	71	64	57	69	62	57	67	61	56	64	59	55	53																												
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46																												
6	72	59	50	44	70	58	50	44	56	49	44	55	48	43	53	47	43	41																												
7	67	54	45	39	65	53	45	39	51	44	39	50	43	39	49	43	38	36																												
8	62	49	41	35	61	49	41	35	47	40	35	46	39	35	45	39	34	33																												
9	58	45	37	32	57	45	37	32	44	37	32	42	36	31	41	36	31	30																												
10	55	42	34	29	54	41	34	29	40	34	29	39	33	29	39	33	29	27																												

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	14587	14587	14587
5°	14632	14448	14524
10°	14539	14266	14266
15°	14377	13987	13853
20°	14182	13644	13404
25°	13921	13208	12852
30°	13661	12729	12256
35°	13340	12262	11552
40°	13041	11735	10877
45°	12713	11174	10170
50°	12360	10601	9345
55°	11975	9948	8520
60°	11605	9193	7666
65°	11105	8304	6699
70°	10575	7334	5824
75°	9774	6113	4743
80°	8927	4776	4341
85°	7904	4569	4324

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 12713 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	154.3	4.0
10°-20°	431.0	11.1
20°-30°	625.0	16.2
30°-40°	712.4	18.4
40°-50°	693.1	17.9
50°-60°	582.2	15.0
60°-70°	405.6	10.5
70°-80°	209.5	5.4
80°-90°	56.6	1.5
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°	1210.3	31.3
0°-40°	1922.7	49.7
0°-60°	3198.0	82.6
0°-90°	3869.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3869.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1641	1641	1641	1641	1641	
5°	1640	1635	1619	1631	1628	156
15°	1562	1550	1520	1518	1505	441
25°	1419	1393	1347	1327	1310	654
35°	1229	1192	1130	1088	1065	770
45°	1011	963	889	832	809	780
55°	773	723	642	576	550	692
65°	528	477	395	338	318	523
75°	285	241	178	149	138	303
85°	78	50	45	42	42	89
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1641.0	1641.0	1641.0	1641.0	1641.0
2.5°	1647.1	1642.2	1627.7	1641.0	1639.8
5°	1639.8	1635.0	1619.2	1631.3	1627.7
7.5°	1627.7	1621.7	1603.5	1612.0	1605.9
10°	1610.8	1604.7	1580.5	1586.5	1580.5
12.5°	1589.0	1580.5	1553.8	1555.0	1545.4
15°	1562.3	1550.2	1519.9	1517.5	1505.4
17.5°	1533.2	1517.5	1482.4	1476.3	1463.0
20°	1499.3	1480.0	1442.4	1429.1	1417.0
22.5°	1460.6	1437.6	1396.4	1380.6	1364.9
25°	1419.4	1392.8	1346.7	1327.4	1310.4
27.5°	1377.0	1345.5	1295.9	1271.7	1254.7
30°	1331.0	1294.7	1240.2	1212.3	1194.1
32.5°	1280.1	1243.8	1186.9	1153.0	1130.0
35°	1229.3	1191.7	1130.0	1087.6	1064.6
37.5°	1179.6	1137.2	1070.6	1027.0	1000.4
40°	1123.9	1079.1	1011.3	961.6	937.4
42.5°	1068.2	1022.2	949.5	897.4	870.8
45°	1011.3	962.8	888.9	832.0	809.0
47.5°	953.1	904.7	828.4	769.0	742.4
50°	893.8	845.3	766.6	701.2	675.8
52.5°	835.7	784.8	706.1	639.5	612.8
55°	772.7	723.0	641.9	576.5	549.8
57.5°	712.1	660.0	581.3	514.7	492.9
60°	652.8	600.7	517.1	453.0	431.2
62.5°	589.8	537.7	455.4	393.6	374.2
65°	528.0	477.2	394.8	337.9	318.5
67.5°	465.1	419.0	339.1	284.6	268.9
70°	406.9	354.9	282.2	235.0	224.1
72.5°	345.2	299.1	228.9	190.1	181.7
75°	284.6	241.0	178.0	149.0	138.1
77.5°	228.9	186.5	134.4	110.2	110.2
80°	174.4	136.9	93.3	87.2	84.8
82.5°	123.5	88.4	69.0	64.2	63.0
85°	77.5	49.7	44.8	42.4	42.4
87.5°	37.5	23.0	23.0	21.8	21.8
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	20.76	22.34	21.13	22.65	22.97	18.87	20.44	19.23	20.76	21.07
	3H	22.58	24.00	22.96	24.32	24.68	20.13	21.55	20.51	21.87	22.24
	4H	23.26	24.59	23.66	24.94	25.32	20.53	21.86	20.92	22.21	22.58
	6H	23.78	25.01	24.19	25.37	25.77	20.80	22.04	21.21	22.40	22.79
	8H	23.95	25.12	24.37	25.51	25.91	20.90	22.08	21.33	22.47	22.87
	12H	24.06	25.19	24.49	25.57	26.00	20.98	22.11	21.41	22.49	22.92
4H	2H	21.11	22.45	21.51	22.80	23.17	19.57	20.90	19.97	21.25	21.63
	3H	23.13	24.24	23.54	24.64	25.04	21.02	22.13	21.43	22.53	22.93
	4H	23.94	24.95	24.37	25.36	25.80	21.50	22.50	21.93	22.91	23.35
	6H	24.59	25.46	25.04	25.90	26.36	21.86	22.74	22.32	23.18	23.64
	8H	24.80	25.62	25.26	26.06	26.53	22.00	22.82	22.46	23.26	23.73
	12H	24.97	25.70	25.45	26.18	26.65	22.12	22.85	22.60	23.33	23.80
8H	4H	24.05	24.87	24.51	25.31	25.78	21.83	22.65	22.29	23.09	23.56
	6H	24.77	25.45	25.27	25.94	26.42	22.28	22.96	22.78	23.45	23.92
	8H	25.05	25.65	25.56	26.16	26.65	22.48	23.08	22.99	23.59	24.08
	12H	25.28	25.81	25.78	26.30	26.87	22.66	23.20	23.17	23.69	24.25
12H	4H	24.04	24.77	24.52	25.25	25.72	21.88	22.61	22.36	23.08	23.55
	6H	24.77	25.38	25.28	25.88	26.37	22.34	22.95	22.86	23.46	23.95
	8H	25.08	25.62	25.59	26.11	26.67	22.59	23.13	23.10	23.62	24.18