

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: P242730

Luminaire Tested: S124RDRP-S1195D940-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242730
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-26)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124RDRP-S1195D940-X4F0-XX-UDD-F-W
Description: DEFINE 4 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

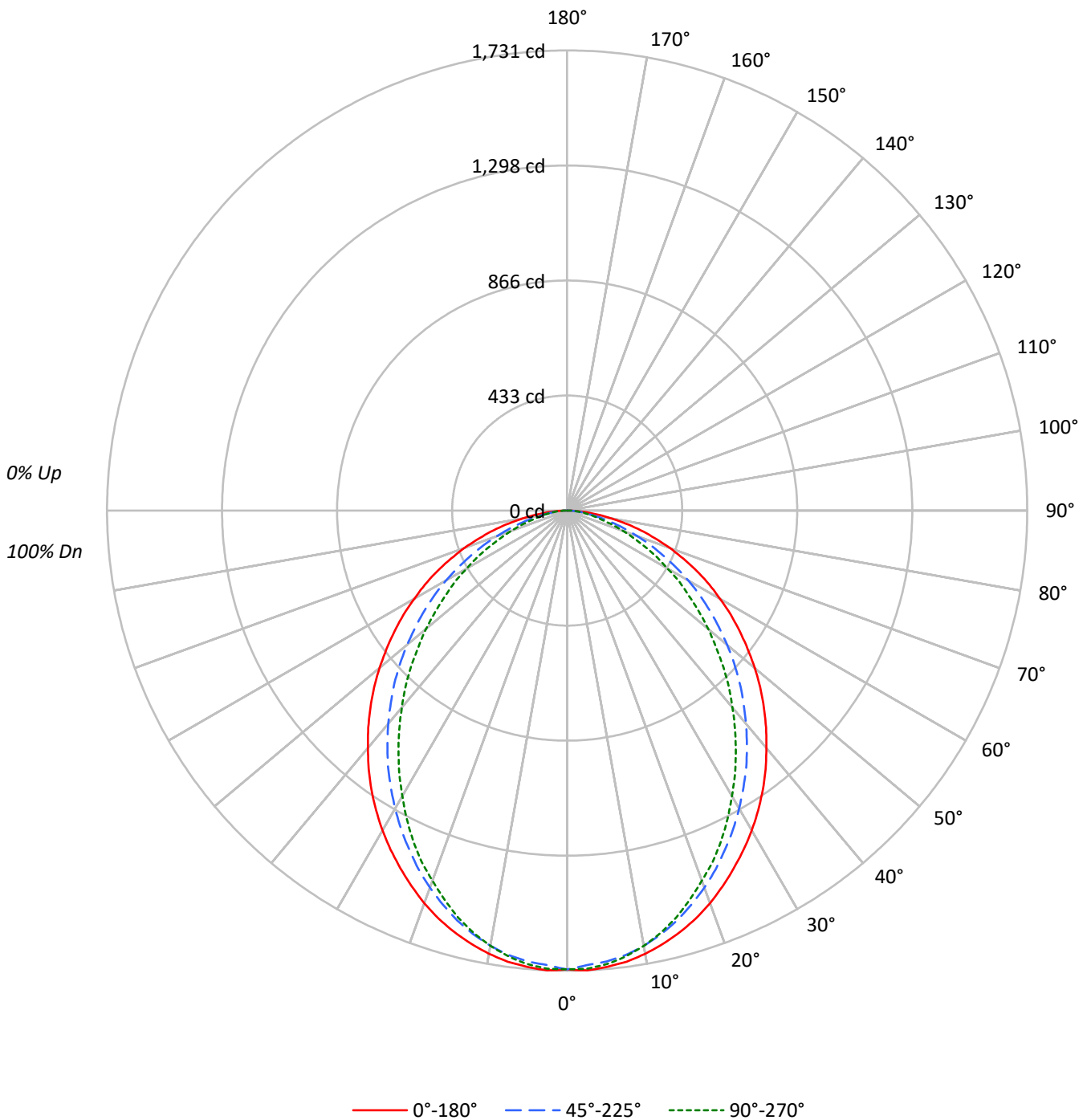
Lumens per Lamp: N/A
Luminaire Lumens: 3988.1 lumens
Efficiency: N/A
Efficacy: 97.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24
Luminous Opening: Rectangular (W 0.31' x L: 3.88' x H: 0')
CIE Type: Direct

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	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	92	90	91	89	87				85	
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	74				72	
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64				62	
4	84	73	65	58	82	72	64	58	69	62	57	67	61	56	65	60	56				54	
5	78	66	57	51	76	65	56	50	62	55	50	61	54	49	59	53	49				47	
6	72	59	51	45	70	58	50	44	57	49	44	55	49	44	53	48	43				41	
7	67	54	46	40	65	53	45	40	52	45	39	50	44	39	49	43	39				37	
8	63	50	41	36	61	49	41	36	48	40	35	46	40	35	45	39	35				33	
9	59	46	38	32	57	45	37	32	44	37	32	43	36	32	42	36	32				30	
10	55	42	35	29	54	42	34	29	41	34	29	40	33	29	39	33	29				27	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	15342	15342	15342
5°	15377	15189	15283
10°	15280	15007	15007
15°	15105	14692	14582
20°	14864	14276	14014
25°	14556	13792	13442
30°	14257	13280	12723
35°	13926	12749	12004
40°	13525	12146	11225
45°	13158	11546	10434
50°	12738	10856	9594
55°	12289	10138	8685
60°	11794	9351	7753
65°	11341	8367	6838
70°	10682	7282	5803
75°	9850	6038	4719
80°	8590	4602	4331
85°	7282	4182	3906

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 13158 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	162.3	4.1
10°-20°	452.5	11.3
20°-30°	653.3	16.4
30°-40°	740.4	18.6
40°-50°	714.9	17.9
50°-60°	594.4	14.9
60°-70°	410.2	10.3
70°-80°	207.3	5.2
80°-90°	52.6	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°	1268.2	31.8
0°-40°	2008.6	50.4
0°-60°	3317.9	83.2
0°-90°	3988.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3988.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1726	1726	1726	1726	1726	
5°	1723	1718	1702	1715	1713	164
15°	1641	1630	1596	1594	1585	463
25°	1484	1460	1406	1384	1370	684
35°	1283	1241	1175	1130	1106	802
45°	1047	998	918	854	830	807
55°	793	740	654	586	560	709
65°	539	482	398	341	325	532
75°	287	238	176	145	137	302
85°	71	45	41	38	38	83
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1726.0	1726.0	1726.0	1726.0	1726.0
2.5°	1731.3	1726.0	1711.5	1726.0	1724.7
5°	1723.3	1718.1	1702.2	1715.4	1712.8
7.5°	1711.5	1706.2	1686.3	1695.6	1691.6
10°	1692.9	1686.3	1662.6	1667.8	1662.6
12.5°	1669.2	1661.2	1632.2	1634.8	1626.9
15°	1641.4	1629.5	1596.5	1593.8	1584.6
17.5°	1609.7	1592.5	1554.2	1547.6	1534.4
20°	1571.4	1554.2	1509.2	1498.7	1481.5
22.5°	1529.1	1509.2	1460.4	1443.2	1430.0
25°	1484.1	1460.4	1406.2	1383.7	1370.5
27.5°	1437.9	1408.8	1352.0	1325.5	1307.0
30°	1389.0	1355.9	1293.8	1260.8	1239.6
32.5°	1337.4	1299.1	1234.4	1194.7	1174.9
35°	1283.3	1241.0	1174.9	1130.0	1106.2
37.5°	1226.4	1182.8	1110.1	1061.2	1037.4
40°	1165.6	1122.0	1046.7	991.2	967.4
42.5°	1107.5	1061.2	981.9	925.1	900.0
45°	1046.7	997.8	918.5	853.7	830.0
47.5°	984.6	934.4	852.4	785.0	758.6
50°	921.1	869.6	785.0	718.9	693.8
52.5°	856.4	806.2	718.9	651.5	625.1
55°	793.0	740.1	654.2	585.5	560.4
57.5°	730.8	675.3	590.7	520.7	502.2
60°	663.4	610.6	526.0	457.3	436.1
62.5°	602.6	547.1	459.9	397.8	381.9
65°	539.2	482.4	397.8	341.0	325.1
67.5°	473.1	418.9	339.6	289.4	270.9
70°	411.0	355.5	280.2	236.6	223.3
72.5°	344.9	296.0	226.0	190.3	178.4
75°	286.8	237.9	175.8	145.4	137.4
77.5°	226.0	183.7	130.8	109.7	107.0
80°	167.8	129.5	89.9	85.9	84.6
82.5°	117.6	83.3	64.8	62.1	60.8
85°	71.4	44.9	41.0	38.3	38.3
87.5°	30.4	19.8	18.5	17.2	18.5
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	20.83	22.40	21.19	22.71	23.02	18.86	20.43	19.23	20.74	21.06
	3H	22.60	24.01	22.98	24.34	24.70	20.11	21.52	20.49	21.85	22.21
	4H	23.26	24.58	23.66	24.93	25.31	20.49	21.81	20.89	22.16	22.54
	6H	23.74	24.96	24.15	25.33	25.72	20.75	21.98	21.16	22.34	22.73
	8H	23.89	25.05	24.31	25.44	25.84	20.85	22.01	21.27	22.40	22.80
	12H	23.98	25.10	24.41	25.48	25.91	20.91	22.03	21.34	22.41	22.84
4H	2H	21.17	22.49	21.57	22.84	23.22	19.56	20.88	19.95	21.23	21.60
	3H	23.13	24.24	23.54	24.63	25.03	20.99	22.09	21.40	22.49	22.89
	4H	23.91	24.91	24.35	25.32	25.76	21.44	22.44	21.88	22.85	23.29
	6H	24.51	25.38	24.97	25.82	26.28	21.79	22.66	22.25	23.10	23.56
	8H	24.70	25.51	25.17	25.96	26.42	21.92	22.73	22.38	23.17	23.64
	12H	24.84	25.57	25.33	26.05	26.52	22.02	22.74	22.50	23.22	23.69
8H	4H	24.01	24.82	24.47	25.26	25.73	21.76	22.57	22.22	23.01	23.48
	6H	24.68	25.35	25.18	25.84	26.32	22.19	22.86	22.68	23.35	23.82
	8H	24.92	25.52	25.44	26.03	26.52	22.37	22.97	22.88	23.48	23.96
	12H	25.12	25.65	25.63	26.14	26.70	22.52	23.05	23.03	23.55	24.11
12H	4H	24.00	24.72	24.48	25.20	25.67	21.80	22.52	22.28	23.00	23.47
	6H	24.67	25.27	25.18	25.78	26.27	22.24	22.84	22.75	23.35	23.84
	8H	24.95	25.48	25.46	25.97	26.54	22.47	23.00	22.98	23.49	24.06