

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: P242701

Luminaire Tested: S124RDRP-S1195D927-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242701
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-S1195D927-X4F0-XX-UDD-F-W
Description: DEFINE 4 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

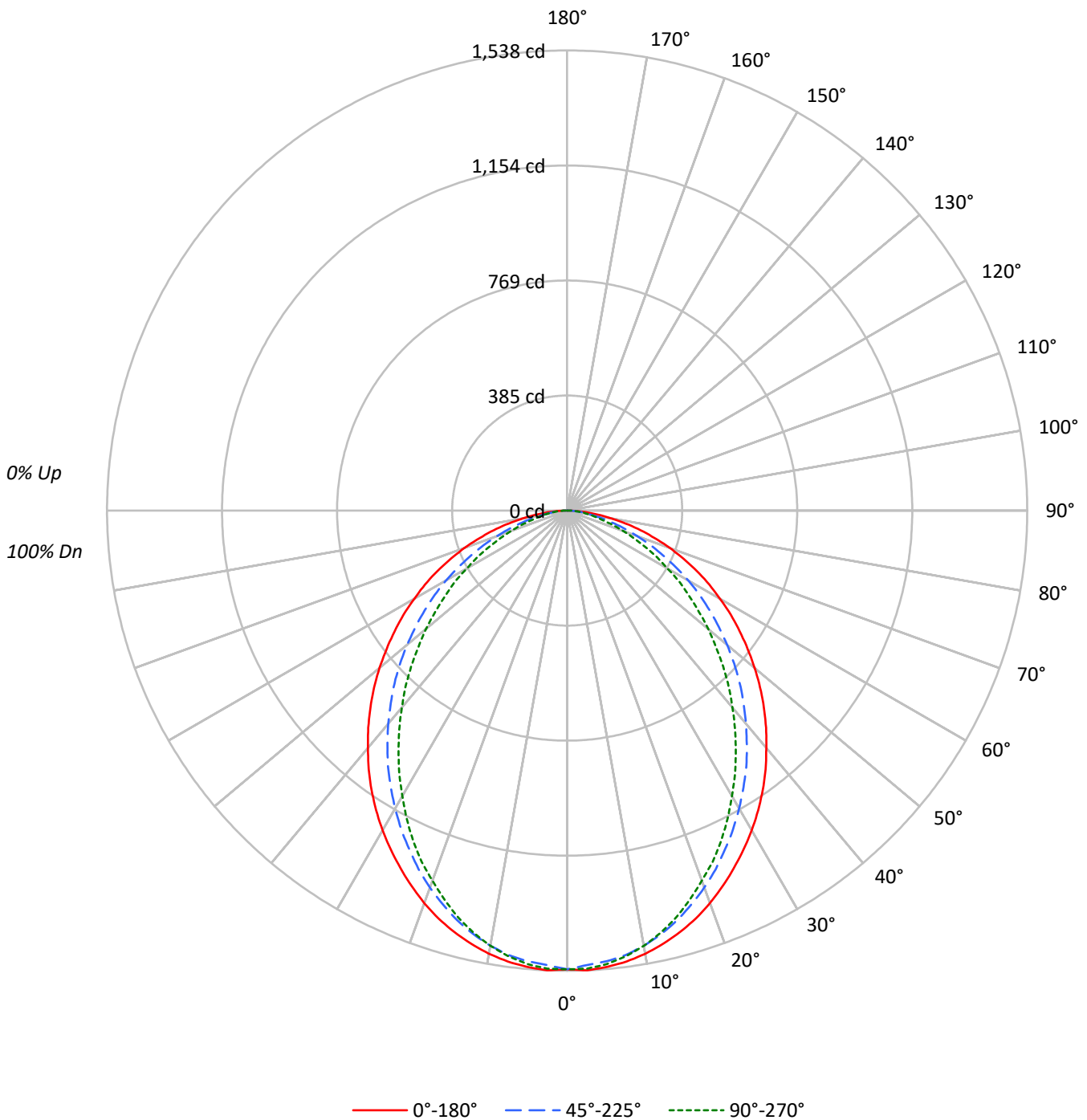
Lumens per Lamp: N/A
Luminaire Lumens: 3542.9 lumens
Efficiency: N/A
Efficacy: 86.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24
Luminous Opening: Rectangular (W 0.31' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 41.1
Input Voltage (V): 120
Input Current (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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CATALOG NUMBER: S124RDRP-S1195D927-X4F0-XX-UDD-F-W

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	105	101	98	107	103	99	96	99	96	93	95	92	90	91	89	87	85					85			
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	74	72					72			
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62					62			
4	84	73	65	58	82	72	64	58	69	62	57	67	61	56	65	60	56	54					54			
5	78	66	57	51	76	65	56	50	62	55	50	61	54	49	59	53	49	47					47			
6	72	59	51	45	70	58	50	44	57	49	44	55	49	44	53	48	43	41					41			
7	67	54	46	40	65	53	45	40	52	45	39	50	44	39	49	43	39	37					37			
8	63	50	41	36	61	49	41	36	48	40	35	46	40	35	45	39	35	33					33			
9	59	46	38	32	57	45	37	32	44	37	32	43	36	32	42	36	32	30					30			
10	55	42	35	29	54	42	34	29	41	34	29	40	33	29	39	33	29	27					27			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13629	13629	13629
5°	13661	13493	13577
10°	13575	13331	13331
15°	13419	13052	12954
20°	13205	12683	12449
25°	12932	12252	11941
30°	12666	11797	11304
35°	12371	11327	10664
40°	12016	10790	9972
45°	11690	10258	9268
50°	11316	9644	8524
55°	10916	9007	7715
60°	10478	8308	6887
65°	10075	7433	6074
70°	9489	6469	5156
75°	8751	5365	4193
80°	7632	4085	3844
85°	6466	3712	3468

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 11690 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	144.2	4.1
10°-20°	402.0	11.3
20°-30°	580.4	16.4
30°-40°	657.8	18.6
40°-50°	635.1	17.9
50°-60°	528.0	14.9
60°-70°	364.4	10.3
70°-80°	184.2	5.2
80°-90°	46.8	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°	1126.6	31.8
0°-40°	1784.4	50.4
0°-60°	2947.6	83.2
0°-90°	3542.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3542.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1533	1533	1533	1533	1533	
5°	1531	1526	1512	1524	1522	145
15°	1458	1448	1418	1416	1408	411
25°	1318	1297	1249	1229	1218	608
35°	1140	1102	1044	1004	983	713
45°	930	886	816	758	737	717
55°	704	658	581	520	498	630
65°	479	428	353	303	289	473
75°	255	211	156	129	122	269
85°	63	40	36	34	34	73
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1533.3	1533.3	1533.3	1533.3	1533.3
2.5°	1538.0	1533.3	1520.4	1533.3	1532.2
5°	1531.0	1526.3	1512.2	1523.9	1521.6
7.5°	1520.4	1515.7	1498.1	1506.3	1502.8
10°	1504.0	1498.1	1477.0	1481.7	1477.0
12.5°	1482.9	1475.8	1450.0	1452.3	1445.3
15°	1458.2	1447.6	1418.3	1415.9	1407.7
17.5°	1430.0	1414.8	1380.7	1374.8	1363.1
20°	1396.0	1380.7	1340.8	1331.4	1316.1
22.5°	1358.4	1340.8	1297.4	1282.1	1270.3
25°	1318.5	1297.4	1249.2	1229.3	1217.5
27.5°	1277.4	1251.6	1201.1	1177.6	1161.2
30°	1234.0	1204.6	1149.4	1120.1	1101.3
32.5°	1188.2	1154.1	1096.6	1061.4	1043.8
35°	1140.0	1102.5	1043.8	1003.8	982.7
37.5°	1089.5	1050.8	986.2	942.8	921.6
40°	1035.5	996.8	929.9	880.6	859.4
42.5°	983.9	942.8	872.3	821.9	799.5
45°	929.9	886.4	816.0	758.5	737.3
47.5°	874.7	830.1	757.3	697.4	673.9
50°	818.3	772.5	697.4	638.7	616.4
52.5°	760.8	716.2	638.7	578.8	555.3
55°	704.4	657.5	581.2	520.1	497.8
57.5°	649.3	600.0	524.8	462.6	446.1
60°	589.4	542.4	467.3	406.2	387.4
62.5°	535.4	486.1	408.6	353.4	339.3
65°	479.0	428.5	353.4	302.9	288.8
67.5°	420.3	372.2	301.7	257.1	240.7
70°	365.1	315.8	248.9	210.2	198.4
72.5°	306.4	263.0	200.8	169.1	158.5
75°	254.8	211.3	156.2	129.1	122.1
77.5°	200.8	163.2	116.2	97.4	95.1
80°	149.1	115.1	79.8	76.3	75.1
82.5°	104.5	74.0	57.5	55.2	54.0
85°	63.4	39.9	36.4	34.0	34.0
87.5°	27.0	17.6	16.4	15.3	16.4
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	20.42	21.99	20.78	22.30	22.61	18.45	20.02	18.81	20.33	20.64
	3H	22.19	23.60	22.57	23.93	24.29	19.70	21.11	20.08	21.44	21.80
	4H	22.85	24.17	23.25	24.52	24.90	20.08	21.40	20.48	21.75	22.13
	6H	23.33	24.55	23.74	24.92	25.31	20.34	21.57	20.75	21.93	22.32
	8H	23.48	24.64	23.90	25.03	25.43	20.43	21.60	20.86	21.99	22.39
	12H	23.57	24.69	24.00	25.07	25.50	20.50	21.62	20.93	22.00	22.43
4H	2H	20.76	22.08	21.15	22.43	22.80	19.14	20.47	19.54	20.82	21.19
	3H	22.72	23.82	23.13	24.22	24.62	20.58	21.68	20.99	22.08	22.48
	4H	23.50	24.50	23.94	24.91	25.35	21.03	22.03	21.46	22.44	22.88
	6H	24.10	24.97	24.56	25.41	25.87	21.38	22.25	21.84	22.69	23.15
	8H	24.29	25.10	24.76	25.54	26.01	21.51	22.32	21.97	22.76	23.23
	12H	24.43	25.16	24.91	25.63	26.10	21.61	22.33	22.09	22.81	23.28
8H	4H	23.60	24.41	24.06	24.85	25.32	21.35	22.16	21.81	22.60	23.07
	6H	24.27	24.94	24.77	25.43	25.91	21.78	22.45	22.27	22.94	23.41
	8H	24.51	25.11	25.03	25.62	26.11	21.96	22.56	22.47	23.07	23.55
	12H	24.71	25.24	25.22	25.73	26.29	22.11	22.64	22.62	23.13	23.70
12H	4H	23.59	24.31	24.07	24.79	25.26	21.39	22.11	21.87	22.59	23.06
	6H	24.26	24.86	24.77	25.37	25.86	21.83	22.43	22.34	22.94	23.43
	8H	24.54	25.07	25.05	25.56	26.13	22.06	22.59	22.57	23.08	23.64