

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: P242699

Luminaire Tested: S124RDRP-S795D927-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242699
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-S795D927-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

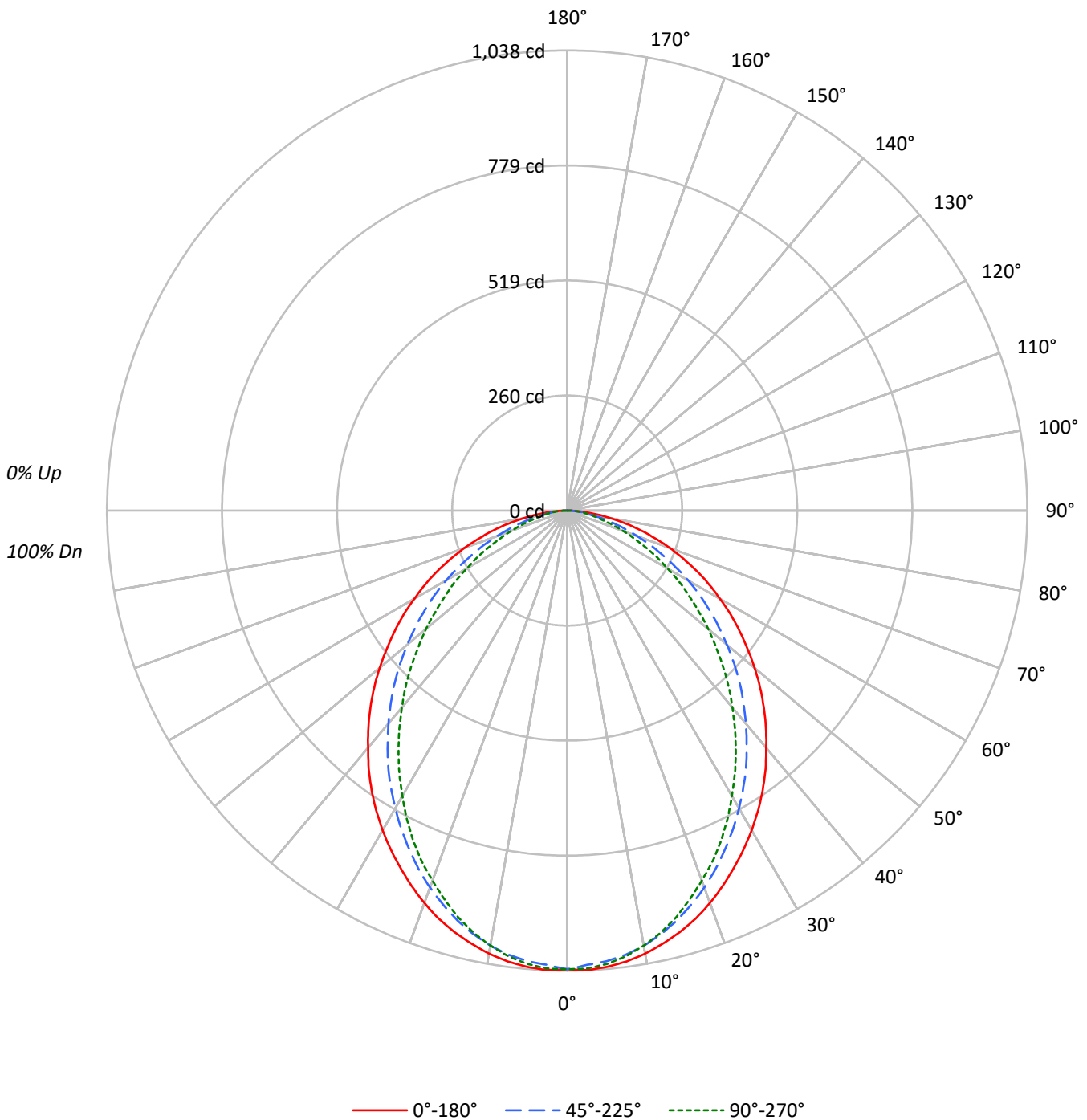
Lumens per Lamp: N/A
Luminaire Lumens: 2390.5 lumens
Efficiency: N/A
Efficacy: 90.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24
Luminous Opening: Rectangular (W 0.31' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 26.4
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					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				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°	9196	9196	9196
5°	9217	9104	9161
10°	9160	8995	8995
15°	9054	8807	8741
20°	8910	8558	8400
25°	8725	8267	8057
30°	8546	7960	7627
35°	8347	7642	7196
40°	8107	7280	6729
45°	7887	6921	6254
50°	7636	6508	5751
55°	7366	6077	5206
60°	7070	5605	4647
65°	6798	5014	4099
70°	6404	4364	3480
75°	5904	3620	2830
80°	5150	2759	2595
85°	4365	2509	2346

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7887 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	97.3	4.1
10°-20°	271.3	11.3
20°-30°	391.6	16.4
30°-40°	443.8	18.6
40°-50°	428.5	17.9
50°-60°	356.3	14.9
60°-70°	245.9	10.3
70°-80°	124.3	5.2
80°-90°	31.6	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°	760.2	31.8
0°-40°	1204.0	50.4
0°-60°	1988.8	83.2
0°-90°	2390.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2390.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1035	1035	1035	1035	1035	
5°	1033	1030	1020	1028	1027	98
15°	984	977	957	955	950	277
25°	890	875	843	829	822	410
35°	769	744	704	677	663	481
45°	627	598	551	512	498	484
55°	475	444	392	351	336	425
65°	323	289	238	204	195	319
75°	172	143	105	87	82	181
85°	43	27	25	23	23	49
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1034.6	1034.6	1034.6	1034.6	1034.6
2.5°	1037.8	1034.6	1025.9	1034.6	1033.8
5°	1033.0	1029.8	1020.3	1028.3	1026.7
7.5°	1025.9	1022.7	1010.8	1016.4	1014.0
10°	1014.8	1010.8	996.6	999.7	996.6
12.5°	1000.5	995.8	978.3	979.9	975.2
15°	983.9	976.8	957.0	955.4	949.8
17.5°	964.9	954.6	931.6	927.6	919.7
20°	941.9	931.6	904.7	898.3	888.0
22.5°	916.6	904.7	875.4	865.1	857.1
25°	889.6	875.4	842.9	829.4	821.5
27.5°	861.9	844.5	810.4	794.6	783.5
30°	832.6	812.8	775.5	755.7	743.1
32.5°	801.7	778.7	739.9	716.1	704.2
35°	769.2	743.9	704.2	677.3	663.1
37.5°	735.1	709.0	665.4	636.1	621.9
40°	698.7	672.6	627.4	594.1	579.9
42.5°	663.8	636.1	588.6	554.5	539.5
45°	627.4	598.1	550.6	511.7	497.5
47.5°	590.2	560.1	511.0	470.6	454.7
50°	552.2	521.3	470.6	430.9	415.9
52.5°	513.3	483.2	430.9	390.5	374.7
55°	475.3	443.6	392.1	350.9	335.9
57.5°	438.1	404.8	354.1	312.1	301.0
60°	397.7	366.0	315.3	274.1	261.4
62.5°	361.2	328.0	275.7	238.4	228.9
65°	323.2	289.1	238.4	204.4	194.9
67.5°	283.6	251.1	203.6	173.5	162.4
70°	246.4	213.1	167.9	141.8	133.9
72.5°	206.8	177.4	135.5	114.1	106.9
75°	171.9	142.6	105.4	87.1	82.4
77.5°	135.5	110.1	78.4	65.8	64.2
80°	100.6	77.6	53.9	51.5	50.7
82.5°	70.5	49.9	38.8	37.2	36.4
85°	42.8	26.9	24.6	23.0	23.0
87.5°	18.2	11.9	11.1	10.3	11.1
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	19.05	20.62	19.42	20.93	21.25	17.08	18.65	17.45	18.96	19.28
	3H	20.82	22.23	21.20	22.56	22.92	18.34	19.74	18.71	20.07	20.43
	4H	21.48	22.81	21.88	23.15	23.53	18.71	20.04	19.11	20.38	20.76
	6H	21.96	23.18	22.37	23.55	23.94	18.97	20.20	19.39	20.56	20.96
	8H	22.11	23.28	22.53	23.66	24.06	19.07	20.23	19.49	20.62	21.02
	12H	22.21	23.32	22.64	23.71	24.13	19.13	20.25	19.56	20.63	21.06
4H	2H	19.39	20.71	19.79	21.06	21.44	17.78	19.10	18.18	19.45	19.83
	3H	21.36	22.46	21.77	22.86	23.26	19.21	20.31	19.62	20.71	21.11
	4H	22.14	23.13	22.57	23.54	23.98	19.66	20.66	20.10	21.07	21.51
	6H	22.73	23.60	23.19	24.04	24.50	20.01	20.88	20.47	21.32	21.78
	8H	22.93	23.73	23.39	24.18	24.64	20.14	20.95	20.60	21.39	21.86
	12H	23.07	23.79	23.55	24.27	24.74	20.24	20.96	20.72	21.44	21.91
8H	4H	22.23	23.04	22.69	23.48	23.95	19.98	20.79	20.44	21.23	21.70
	6H	22.90	23.57	23.40	24.06	24.54	20.41	21.08	20.91	21.57	22.05
	8H	23.15	23.75	23.66	24.25	24.74	20.59	21.19	21.10	21.70	22.19
	12H	23.34	23.87	23.85	24.36	24.93	20.75	21.28	21.25	21.77	22.33
12H	4H	22.22	22.95	22.70	23.42	23.89	20.02	20.74	20.50	21.22	21.69
	6H	22.89	23.49	23.40	24.00	24.49	20.46	21.06	20.98	21.57	22.06
	8H	23.17	23.70	23.68	24.20	24.76	20.69	21.22	21.20	21.71	22.28