

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: P242493

Luminaire Tested: S123DRP-S775D927-X4F0-XX-UDD-D-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242493
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-15)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123DRP-S775D927-X4F0-XX-UDD-D-W
Description: DEFINE 3 DIRECT RECESSED WITH SATIN DROP DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

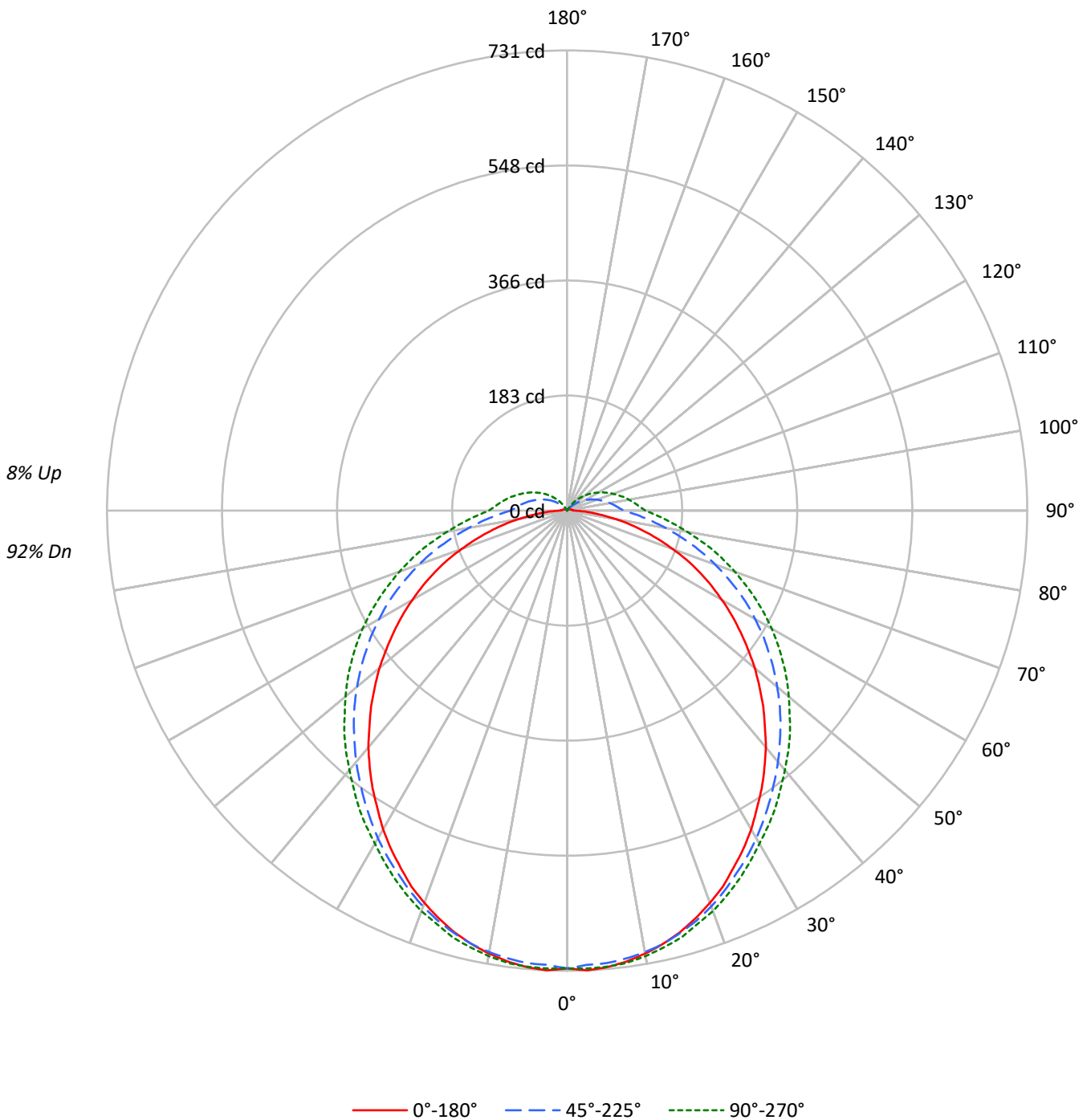
Lumens per Lamp: N/A
Luminaire Lumens: 2444.0 lumens
Efficiency: N/A
Efficacy: 92.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.25 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.23' x L: 3.88' x H: 0.08')
CIE Type: Direct

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	0
RCR																		
0	117	117	117	117	113	113	113	113	106	106	106	100	100	100	94	94	94	92
1	105	100	95	90	102	97	92	88	91	87	84	85	82	80	80	78	76	73
2	95	86	79	72	92	83	77	71	79	73	68	74	69	65	70	66	63	60
3	86	75	67	60	83	73	65	59	69	62	56	65	59	54	61	56	52	50
4	79	66	57	50	76	64	56	49	61	54	48	57	51	46	54	49	45	42
5	72	59	50	43	70	58	49	42	54	47	41	52	45	40	49	43	39	36
6	67	53	44	37	64	52	43	37	49	42	36	47	40	35	44	38	34	32
7	62	48	39	33	60	47	38	32	45	37	32	42	36	31	40	35	30	28
8	58	44	35	29	56	43	35	29	41	33	28	39	32	28	37	31	27	25
9	54	40	32	26	52	39	31	26	37	30	25	36	29	25	34	28	24	22
10	50	37	29	24	49	36	29	24	35	28	23	33	27	23	32	26	22	20

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8815	8815	8815
5°	8841	8577	8575
10°	8761	8364	8311
15°	8649	8125	8026
20°	8487	7856	7715
25°	8287	7549	7392
30°	8082	7273	7066
35°	7853	6981	6802
40°	7635	6714	6521
45°	7392	6458	6294
50°	7152	6203	6045
55°	6887	5942	5818
60°	6628	5676	5585
65°	6363	5394	5310
70°	5963	5074	5028
75°	5463	4710	4737
80°	4878	4346	4406
85°	4331	4071	4189

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7392 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	69.0	2.8
10°-20°	196.7	8.0
20°-30°	294.1	12.0
30°-40°	351.1	14.4
40°-50°	367.4	15.0
50°-60°	344.8	14.1
60°-70°	288.0	11.8
70°-80°	205.9	8.4
80°-90°	122.5	5.0
90°-100°	77.0	3.2
100°-110°	56.6	2.3
110°-120°	37.8	1.5
120°-130°	21.6	0.9
130°-140°	9.7	0.4
140°-150°	2.0	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	559.7	22.9
0°-40°	910.9	37.3
0°-60°	1623.0	66.4
0°-90°	2239.4	91.6
90°-120°	171.4	7.0
90°-150°	204.6	8.4
90°-180°	205.0	8.4
0°-180°	2444.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	727	727	727	727	727	
5°	728	726	722	728	727	69
15°	693	696	695	703	702	195
25°	626	634	636	646	646	288
35°	539	551	562	574	577	337
45°	440	460	479	494	501	340
55°	336	362	390	412	418	301
65°	232	263	298	322	330	229
75°	126	163	203	229	238	135
85°	39	78	120	147	155	40
90°	10	49	90	116	124	7
95°	9	40	78	103	111	7
105°	6	25	59	82	89	6
115°	4	14	42	61	67	4
125°	2	2	25	42	48	2
135°	2	1	10	24	28	1
145°	1	0	0	6	10	0
155°	0	0	0	0	0	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	727.2	727.2	727.2	727.2	727.2
2.5°	731.2	728.8	722.5	728.8	728.0
5°	728.0	726.4	721.7	728.0	727.2
7.5°	722.5	722.5	717.7	725.6	724.8
10°	714.5	716.1	712.2	720.1	718.5
12.5°	705.0	707.4	705.0	712.2	710.6
15°	693.2	695.5	694.7	702.7	701.9
17.5°	678.9	683.7	682.9	690.0	688.4
20°	663.1	667.8	669.4	676.5	677.3
22.5°	646.4	651.2	653.6	663.1	662.3
25°	625.8	633.7	636.1	646.4	646.4
27.5°	606.0	614.7	619.5	628.2	629.0
30°	584.6	594.9	601.3	610.8	610.8
32.5°	560.9	572.7	581.5	591.8	594.1
35°	538.7	551.4	561.7	573.5	576.7
37.5°	514.9	529.2	541.1	554.5	556.9
40°	491.2	505.4	521.3	534.7	537.9
42.5°	465.0	483.2	499.9	514.9	519.7
45°	440.5	459.5	479.3	494.3	500.7
47.5°	414.3	435.7	457.9	474.5	479.3
50°	389.0	411.1	435.7	453.9	459.5
52.5°	362.0	385.8	413.5	432.5	439.7
55°	335.9	362.0	390.5	411.9	418.3
57.5°	310.5	337.5	368.4	389.8	396.9
60°	283.6	312.1	344.6	366.8	375.5
62.5°	258.3	287.6	322.4	344.6	352.5
65°	232.1	263.0	297.9	321.6	329.5
67.5°	206.0	238.4	273.3	299.4	305.8
70°	178.2	212.3	250.3	275.7	283.6
72.5°	152.9	187.0	226.6	252.7	260.6
75°	126.0	163.2	202.8	228.9	238.4
77.5°	103.0	140.2	179.8	207.6	214.7
80°	78.4	117.2	158.4	185.4	193.3
82.5°	57.0	96.6	138.6	165.6	173.5
85°	38.8	78.4	120.4	147.3	155.3
87.5°	23.8	63.4	103.8	130.7	138.6
90°	10.3	49.1	89.5	116.5	124.4
92.5°	9.5	43.6	83.2	109.3	116.5
95°	8.7	39.6	78.4	103.0	110.9
97.5°	7.9	36.4	73.7	97.4	105.4
100°	7.1	32.5	68.9	91.9	99.8
102.5°	6.3	28.5	64.2	86.3	94.3
105°	6.3	25.3	59.4	81.6	88.7
107.5°	5.5	22.2	54.7	76.0	83.2
110°	4.8	19.0	50.7	71.3	77.6



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	4.8	15.8	45.9	65.8	72.9
115°	4.0	13.5	42.0	61.0	67.3
117.5°	4.0	10.3	37.2	56.2	62.6
120°	3.2	7.1	33.3	51.5	57.0
122.5°	3.2	4.8	29.3	46.7	52.3
125°	2.4	2.4	25.3	42.0	47.5
127.5°	2.4	1.6	21.4	37.2	42.8
130°	2.4	1.6	17.4	32.5	37.2
132.5°	1.6	1.6	13.5	27.7	33.3
135°	1.6	0.8	9.5	23.8	27.7
137.5°	1.6	0.8	6.3	19.0	23.0
140°	0.8	0.8	3.2	15.1	19.0
142.5°	0.8	0.0	0.0	10.3	14.3
145°	0.8	0.0	0.0	6.3	9.5
147.5°	0.0	0.0	0.0	2.4	5.5
150°	0.0	0.0	0.0	0.0	1.6
152.5°	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0
180°	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	16.61	18.12	17.10	18.60	19.12	18.61	20.12	19.10	20.60	21.11
	3H	18.17	19.54	18.67	20.03	20.59	20.99	22.36	21.49	22.85	23.41
	4H	18.69	19.99	19.21	20.50	21.07	22.10	23.40	22.62	23.91	24.48
	6H	19.04	20.25	19.57	20.77	21.35	23.21	24.42	23.74	24.94	25.53
	8H	19.12	20.28	19.67	20.83	21.42	23.77	24.92	24.31	25.47	26.06
	12H	19.17	20.28	19.73	20.82	21.44	24.37	25.48	24.93	26.02	26.64
4H	2H	17.52	18.82	18.04	19.33	19.90	19.07	20.37	19.59	20.88	21.45
	3H	19.32	20.43	19.86	20.98	21.57	21.66	22.77	22.20	23.32	23.91
	4H	19.99	21.00	20.54	21.56	22.18	22.93	23.94	23.49	24.50	25.13
	6H	20.46	21.35	21.04	21.94	22.58	24.21	25.11	24.79	25.69	26.33
	8H	20.60	21.44	21.18	22.02	22.67	24.87	25.71	25.45	26.29	26.94
	12H	20.68	21.45	21.28	22.06	22.71	25.58	26.34	26.18	26.96	27.61
8H	4H	20.62	21.46	21.20	22.05	22.70	23.16	24.00	23.74	24.58	25.23
	6H	21.28	21.99	21.89	22.61	23.27	24.60	25.31	25.21	25.94	26.59
	8H	21.51	22.15	22.13	22.79	23.46	25.37	26.02	26.00	26.65	27.32
	12H	21.68	22.25	22.31	22.88	23.61	26.26	26.83	26.88	27.45	28.19
12H	4H	20.78	21.54	21.38	22.15	22.81	23.17	23.93	23.77	24.54	25.20
	6H	21.52	22.16	22.14	22.80	23.47	24.64	25.28	25.26	25.92	26.58
	8H	21.84	22.41	22.47	23.04	23.77	25.48	26.05	26.11	26.68	27.41