

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: P242728

Luminaire Tested: S124RDRP-S795D940-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242728
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-S795D940-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

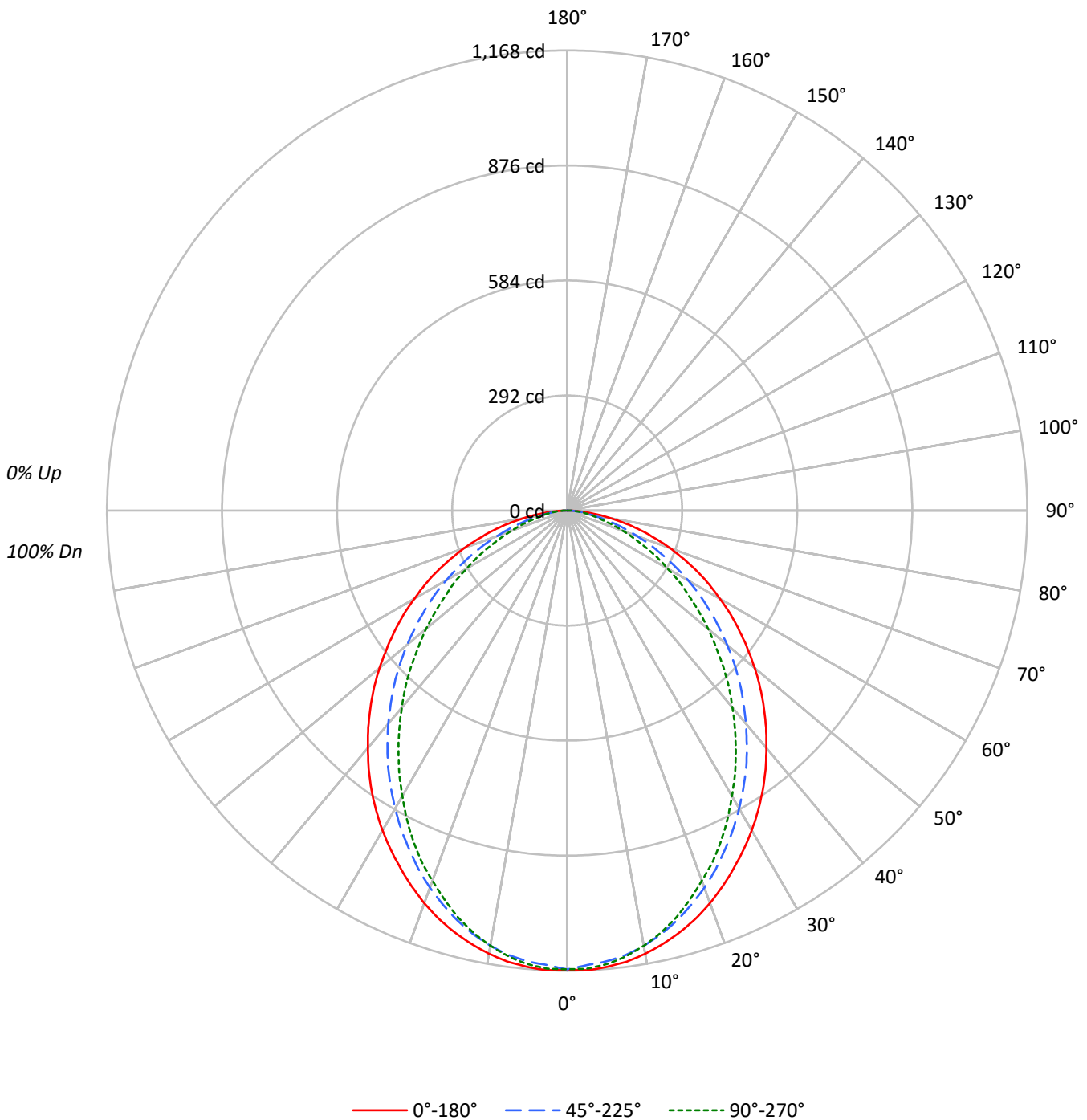
Lumens per Lamp: N/A
Luminaire Lumens: 2690.9 lumens
Efficiency: N/A
Efficacy: 101.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24
Luminous Opening: Rectangular (W 0.31' x L: 3.88' x H: 0')
CIE Type: Direct

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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	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°	10352	10352	10352
5°	10376	10248	10312
10°	10310	10125	10125
15°	10192	9913	9839
20°	10029	9632	9456
25°	9822	9306	9069
30°	9619	8960	8585
35°	9396	8602	8099
40°	9126	8194	7574
45°	8878	7790	7040
50°	8595	7325	6473
55°	8291	6841	5860
60°	7957	6309	5232
65°	7652	5645	4615
70°	7207	4912	3917
75°	6646	4073	3184
80°	5795	3102	2923
85°	4916	2815	2642

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 8878 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	109.5	4.1
10°-20°	305.3	11.3
20°-30°	440.8	16.4
30°-40°	499.6	18.6
40°-50°	482.4	17.9
50°-60°	401.0	14.9
60°-70°	276.8	10.3
70°-80°	139.9	5.2
80°-90°	35.5	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°	855.7	31.8
0°-40°	1355.3	50.4
0°-60°	2238.7	83.2
0°-90°	2690.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2690.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1165	1165	1165	1165	1165	
5°	1163	1159	1148	1157	1156	110
15°	1108	1100	1077	1075	1069	312
25°	1001	985	949	934	925	461
35°	866	837	793	762	746	541
45°	706	673	620	576	560	545
55°	535	499	441	395	378	479
65°	364	326	268	230	219	359
75°	194	160	119	98	93	204
85°	48	30	28	26	26	56
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1164.6	1164.6	1164.6	1164.6	1164.6
2.5°	1168.1	1164.6	1154.8	1164.6	1163.7
5°	1162.8	1159.2	1148.5	1157.4	1155.7
7.5°	1154.8	1151.2	1137.8	1144.1	1141.4
10°	1142.3	1137.8	1121.8	1125.3	1121.8
12.5°	1126.2	1120.9	1101.3	1103.0	1097.7
15°	1107.5	1099.5	1077.2	1075.4	1069.2
17.5°	1086.1	1074.5	1048.7	1044.2	1035.3
20°	1060.2	1048.7	1018.3	1011.2	999.6
22.5°	1031.7	1018.3	985.3	973.7	964.8
25°	1001.4	985.3	948.8	933.6	924.7
27.5°	970.2	950.6	912.2	894.4	881.9
30°	937.2	914.9	873.0	850.7	836.4
32.5°	902.4	876.6	832.9	806.1	792.7
35°	865.9	837.3	792.7	762.4	746.4
37.5°	827.5	798.1	749.0	716.0	700.0
40°	786.5	757.1	706.2	668.8	652.7
42.5°	747.3	716.0	662.5	624.2	607.3
45°	706.2	673.2	619.7	576.0	560.0
47.5°	664.3	630.4	575.2	529.7	511.8
50°	621.5	586.7	529.7	485.1	468.1
52.5°	577.8	543.9	485.1	439.6	421.8
55°	535.0	499.4	441.4	395.0	378.1
57.5°	493.1	455.7	398.6	351.3	338.8
60°	447.6	412.0	354.9	308.5	294.3
62.5°	406.6	369.2	310.3	268.4	257.7
65°	363.8	325.5	268.4	230.1	219.4
67.5°	319.2	282.7	229.2	195.3	182.8
70°	277.3	239.9	189.0	159.6	150.7
72.5°	232.7	199.7	152.5	128.4	120.4
75°	193.5	160.5	118.6	98.1	92.7
77.5°	152.5	123.9	88.3	74.0	72.2
80°	113.2	87.4	60.6	58.0	57.1
82.5°	79.4	56.2	43.7	41.9	41.0
85°	48.2	30.3	27.6	25.9	25.9
87.5°	20.5	13.4	12.5	11.6	12.5
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	19.46	21.03	19.83	21.34	21.66	17.49	19.06	17.86	19.37	19.69
	3H	21.23	22.64	21.61	22.97	23.33	18.75	20.16	19.12	20.48	20.84
	4H	21.89	23.22	22.29	23.57	23.94	19.12	20.45	19.52	20.79	21.17
	6H	22.37	23.59	22.78	23.96	24.35	19.39	20.61	19.80	20.97	21.37
	8H	22.52	23.69	22.95	24.08	24.48	19.48	20.64	19.90	21.03	21.43
	12H	22.62	23.74	23.05	24.12	24.55	19.54	20.66	19.97	21.04	21.47
4H	2H	19.80	21.12	20.20	21.47	21.85	18.19	19.51	18.59	19.86	20.24
	3H	21.77	22.87	22.18	23.27	23.67	19.62	20.72	20.03	21.12	21.52
	4H	22.55	23.54	22.98	23.96	24.39	20.08	21.07	20.51	21.48	21.92
	6H	23.15	24.01	23.60	24.45	24.91	20.43	21.29	20.88	21.73	22.19
	8H	23.34	24.15	23.80	24.59	25.06	20.55	21.36	21.01	21.80	22.27
	12H	23.48	24.20	23.96	24.68	25.15	20.65	21.37	21.13	21.85	22.32
8H	4H	22.64	23.45	23.11	23.89	24.36	20.39	21.20	20.85	21.64	22.11
	6H	23.31	23.98	23.81	24.47	24.95	20.82	21.49	21.32	21.98	22.46
	8H	23.56	24.16	24.07	24.67	25.15	21.00	21.60	21.51	22.11	22.60
	12H	23.75	24.28	24.26	24.77	25.34	21.16	21.69	21.67	22.18	22.74
12H	4H	22.63	23.36	23.11	23.83	24.30	20.43	21.15	20.91	21.63	22.10
	6H	23.30	23.90	23.82	24.41	24.90	20.87	21.48	21.39	21.98	22.47
	8H	23.59	24.12	24.09	24.61	25.17	21.10	21.63	21.61	22.13	22.69