

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: P242704

Luminaire Tested: S124RDRP-S795D830-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242704
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-S795D830-X4F0-XX-UDD-F-W
Description: DEFINE 4 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

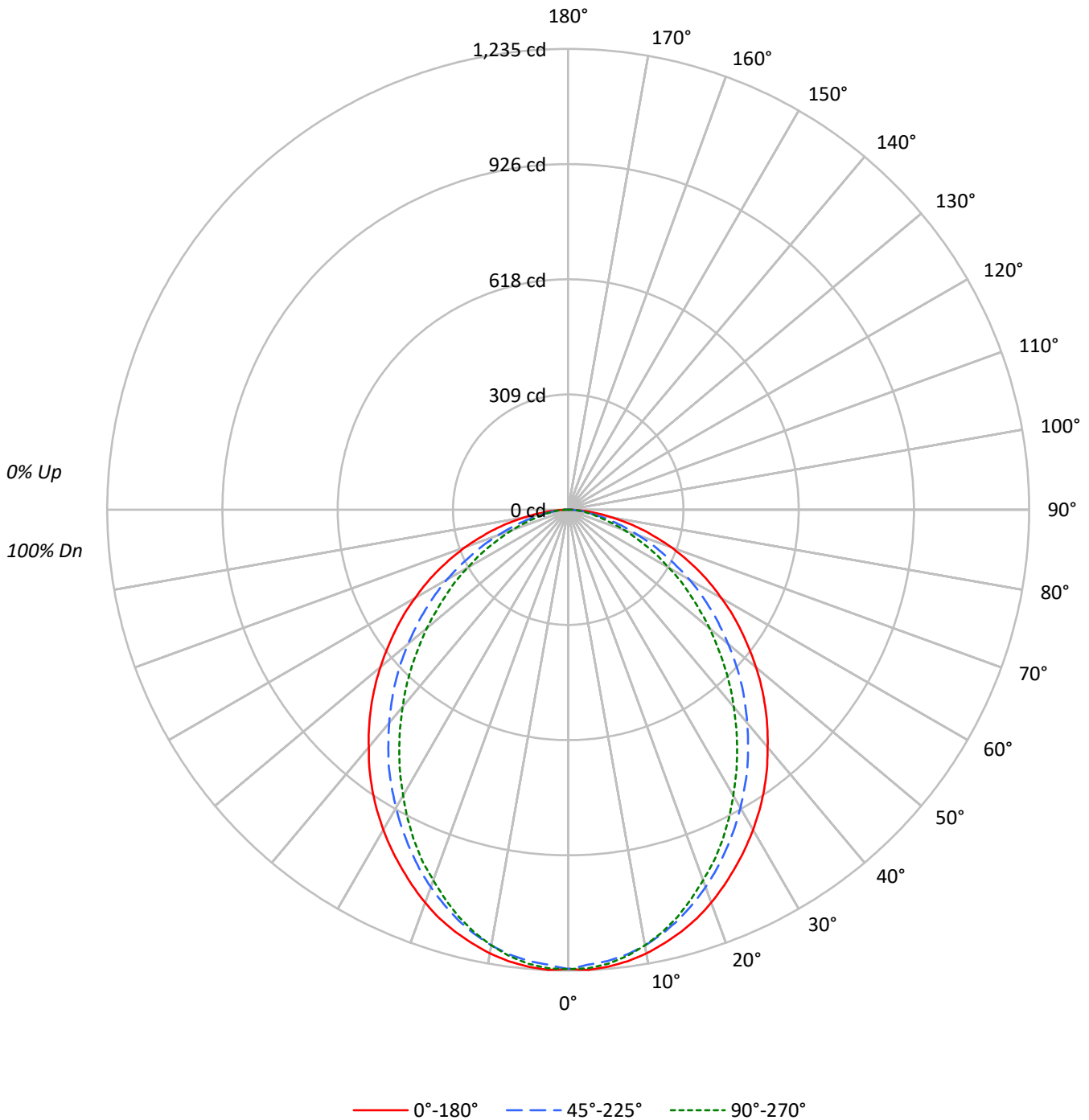
Lumens per Lamp: N/A
Luminaire Lumens: 2844.3 lumens
Efficiency: N/A
Efficacy: 107.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24
Luminous Opening: Rectangular (W 0.31' x L: 3.88' x H: 0')
CIE Type: Direct

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	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°	10942	10942	10942
5°	10967	10832	10899
10°	10898	10702	10702
15°	10772	10478	10400
20°	10601	10182	9995
25°	10382	9836	9586
30°	10168	9471	9074
35°	9931	9092	8561
40°	9646	8662	8005
45°	9384	8235	7441
50°	9085	7743	6842
55°	8764	7231	6193
60°	8412	6668	5529
65°	8089	5967	4878
70°	7618	5193	4140
75°	7023	4307	3366
80°	6127	3281	3087
85°	5191	2978	2784

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 9384 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	115.8	4.1
10°-20°	322.7	11.3
20°-30°	466.0	16.4
30°-40°	528.1	18.6
40°-50°	509.9	17.9
50°-60°	423.9	14.9
60°-70°	292.6	10.3
70°-80°	147.8	5.2
80°-90°	37.5	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°	904.4	31.8
0°-40°	1432.5	50.4
0°-60°	2366.3	83.2
0°-90°	2844.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2844.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1231	1231	1231	1231	1231	
5°	1229	1225	1214	1223	1222	117
15°	1171	1162	1139	1137	1130	330
25°	1058	1042	1003	987	977	488
35°	915	885	838	806	789	572
45°	746	712	655	609	592	576
55°	566	528	467	418	400	506
65°	385	344	284	243	232	380
75°	204	170	125	104	98	216
85°	51	32	29	27	27	59
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1231.0	1231.0	1231.0	1231.0	1231.0
2.5°	1234.7	1231.0	1220.6	1231.0	1230.0
5°	1229.1	1225.3	1214.0	1223.4	1221.5
7.5°	1220.6	1216.8	1202.7	1209.3	1206.5
10°	1207.4	1202.7	1185.7	1189.5	1185.7
12.5°	1190.4	1184.8	1164.0	1165.9	1160.3
15°	1170.6	1162.2	1138.6	1136.7	1130.1
17.5°	1148.0	1135.8	1108.4	1103.7	1094.3
20°	1120.7	1108.4	1076.4	1068.8	1056.6
22.5°	1090.5	1076.4	1041.5	1029.3	1019.8
25°	1058.5	1041.5	1002.9	986.8	977.4
27.5°	1025.5	1004.7	964.2	945.4	932.2
30°	990.6	967.0	922.7	899.2	884.1
32.5°	953.9	926.5	880.3	852.1	837.9
35°	915.2	885.0	837.9	805.9	788.9
37.5°	874.7	843.6	791.7	756.9	739.9
40°	831.3	800.2	746.5	706.9	689.9
42.5°	789.9	756.9	700.3	659.8	641.9
45°	746.5	711.6	655.1	608.9	591.9
47.5°	702.2	666.4	607.9	559.9	541.0
50°	657.0	620.2	559.9	512.7	494.8
52.5°	610.8	575.0	512.7	464.7	445.8
55°	565.5	527.8	466.6	417.5	399.6
57.5°	521.2	481.6	421.3	371.4	358.2
60°	473.2	435.5	375.1	326.1	311.0
62.5°	429.8	390.2	328.0	283.7	272.4
65°	384.6	344.0	283.7	243.2	231.9
67.5°	337.4	298.8	242.2	206.4	193.2
70°	293.1	253.5	199.8	168.7	159.3
72.5°	246.0	211.1	161.2	135.7	127.2
75°	204.5	169.7	125.4	103.7	98.0
77.5°	161.2	131.0	93.3	78.2	76.3
80°	119.7	92.4	64.1	61.3	60.3
82.5°	83.9	59.4	46.2	44.3	43.4
85°	50.9	32.0	29.2	27.3	27.3
87.5°	21.7	14.1	13.2	12.3	13.2
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	19.66	21.22	20.02	21.54	21.85	17.69	19.25	18.05	19.57	19.88
	3H	21.43	22.83	21.80	23.16	23.52	18.94	20.35	19.32	20.68	21.04
	4H	22.09	23.41	22.49	23.76	24.14	19.32	20.64	19.72	20.99	21.37
	6H	22.56	23.79	22.97	24.15	24.54	19.58	20.80	19.99	21.17	21.56
	8H	22.71	23.88	23.14	24.27	24.67	19.67	20.84	20.10	21.23	21.63
	12H	22.81	23.93	23.24	24.31	24.74	19.74	20.85	20.17	21.23	21.66
4H	2H	19.99	21.32	20.39	21.66	22.04	18.38	19.71	18.78	20.05	20.43
	3H	21.96	23.06	22.37	23.46	23.86	19.82	20.92	20.23	21.32	21.72
	4H	22.74	23.73	23.17	24.15	24.59	20.27	21.26	20.70	21.68	22.11
	6H	23.34	24.20	23.79	24.64	25.10	20.62	21.48	21.07	21.92	22.38
	8H	23.53	24.34	23.99	24.78	25.25	20.74	21.55	21.21	22.00	22.46
	12H	23.67	24.39	24.15	24.87	25.34	20.84	21.57	21.32	22.04	22.51
8H	4H	22.84	23.64	23.30	24.09	24.55	20.58	21.39	21.05	21.84	22.30
	6H	23.51	24.18	24.00	24.67	25.14	21.01	21.68	21.51	22.17	22.65
	8H	23.75	24.35	24.26	24.86	25.35	21.19	21.79	21.71	22.30	22.79
	12H	23.95	24.48	24.45	24.97	25.53	21.35	21.88	21.86	22.37	22.94
12H	4H	22.83	23.55	23.31	24.03	24.50	20.62	21.35	21.10	21.82	22.29
	6H	23.50	24.10	24.01	24.61	25.09	21.07	21.67	21.58	22.18	22.66
	8H	23.78	24.31	24.29	24.80	25.36	21.30	21.83	21.81	22.32	22.88