

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P930510

Luminaire Tested: DFN2DS-PN3F0-030DS835-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930510
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P333882)
Test Lab: INNOVATION CENTER
Issue Date: 11/20/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DS-PN3F0-030DS835-RLL
Description: 3 foot, Pentagon Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

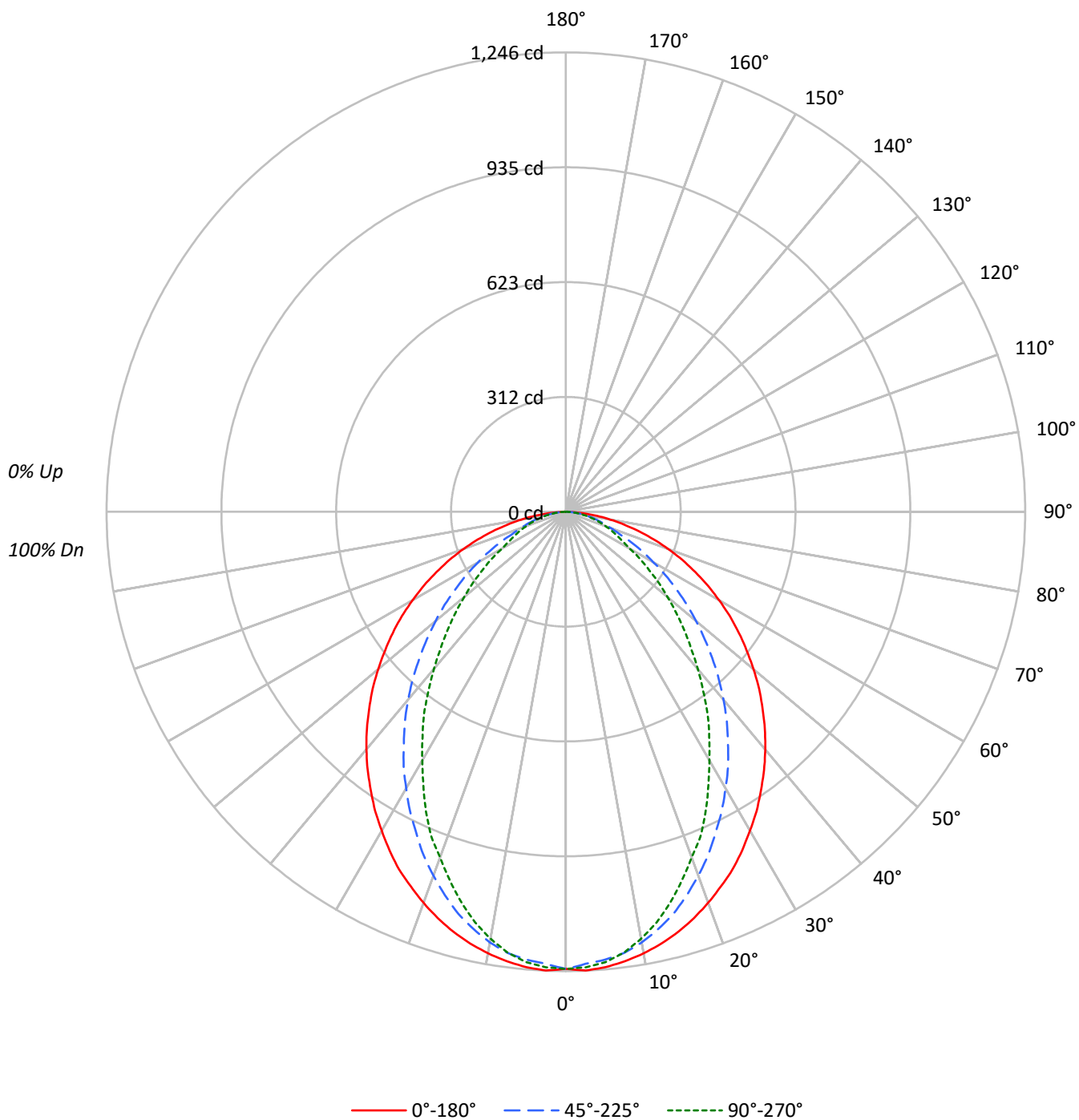
Lumens per Lamp: N/A
Luminaire Lumens: 2550.0 lumens
Efficiency: N/A
Efficacy: 90.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 3.11' x L: 2.96' x H: 0')
CIE Type: Direct

Input Watts (W): 28.1
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.099
Total Harmonic Distortion (THDi): 0.979
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
RW	70	50	30	10	70	50	30	10	50	30	10		50	30	10		50
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102
1	110	106	102	98	107	103	100	97	99	96	94		95	93	91		92
2	101	94	87	82	98	92	86	81	88	83	79		85	81	78		82
3	93	83	76	70	90	82	75	69	79	73	68		76	71	67		74
4	86	75	66	60	83	73	66	60	71	64	59		69	63	58		66
5	79	67	59	53	77	66	58	52	64	57	52		62	56	51		60
6	74	61	53	47	72	60	52	46	58	51	46		57	50	46		55
7	68	56	47	42	67	55	47	42	53	46	41		52	46	41		51
8	64	51	43	38	62	51	43	37	49	42	37		48	42	37		47
9	60	47	39	34	59	47	39	34	46	39	34		44	38	34		44
10	56	44	36	31	55	43	36	31	42	36	31		41	35	31		41

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1449	1449	1449
5°	1455	1431	1439
10°	1444	1408	1396
15°	1427	1366	1327
20°	1404	1306	1241
25°	1381	1239	1158
30°	1348	1169	1051
35°	1316	1094	958
40°	1284	1015	849
45°	1247	928	751
50°	1208	839	655
55°	1168	743	563
60°	1123	643	467
65°	1071	540	425
70°	1009	445	391
75°	932	406	365
80°	823	362	333
85°	646	286	286

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1247 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	116.2	4.6
10°-20°	319.0	12.5
20°-30°	447.9	17.6
30°-40°	488.2	19.1
40°-50°	448.7	17.6
50°-60°	352.4	13.8
60°-70°	229.4	9.0
70°-80°	118.1	4.6
80°-90°	30.1	1.2
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°	883.1	34.6
0°-40°	1371.3	53.8
0°-60°	2172.4	85.2
0°-90°	2550.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2550.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1240	1240	1240	1240	1240	
5°	1240	1234	1220	1230	1226	118
15°	1179	1167	1129	1108	1096	332
25°	1070	1034	960	914	898	492
35°	922	865	766	696	671	577
45°	754	679	561	481	454	582
55°	573	486	365	297	276	512
65°	387	296	195	157	154	384
75°	206	128	90	82	81	218
85°	48	25	21	21	21	58
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1239.9	1239.9	1239.9	1239.9	1239.9
2.5°	1245.5	1239.9	1227.5	1238.8	1236.6
5°	1239.9	1234.3	1219.7	1229.8	1226.4
7.5°	1229.8	1223.1	1207.4	1211.8	1206.2
10°	1216.3	1208.5	1186.1	1182.6	1176.0
12.5°	1199.5	1189.4	1159.1	1152.4	1140.0
15°	1179.3	1166.9	1128.8	1107.5	1096.3
17.5°	1155.7	1137.8	1090.6	1066.0	1048.0
20°	1128.8	1106.3	1050.2	1022.3	997.5
22.5°	1099.7	1073.8	1008.7	970.6	953.8
25°	1070.5	1034.5	960.5	914.5	897.6
27.5°	1035.7	997.5	915.6	862.9	837.0
30°	998.7	956.0	866.2	809.1	778.7
32.5°	962.7	911.1	819.2	751.8	723.7
35°	922.4	865.1	766.4	695.7	671.0
37.5°	883.1	821.3	717.0	639.5	611.6
40°	841.6	774.3	665.4	585.7	556.6
42.5°	798.9	727.2	613.8	530.7	502.7
45°	754.1	678.8	561.1	481.3	454.4
47.5°	711.4	631.8	510.6	430.8	406.2
50°	664.3	584.6	461.2	383.7	360.2
52.5°	618.2	534.1	414.1	340.0	318.7
55°	573.3	485.8	364.6	297.4	276.1
57.5°	527.4	437.6	321.0	258.1	240.1
60°	480.2	390.5	274.9	217.7	199.8
62.5°	434.3	344.5	235.6	181.8	172.9
65°	387.1	296.2	195.2	157.1	153.7
67.5°	342.3	251.3	157.1	138.0	134.6
70°	295.1	207.6	130.1	118.9	114.4
72.5°	250.2	167.1	108.8	99.9	97.6
75°	206.4	127.9	89.8	81.9	80.8
77.5°	162.7	90.8	70.7	66.2	63.9
80°	122.3	65.1	53.8	49.4	49.4
82.5°	85.2	43.8	37.0	34.8	34.8
85°	48.2	24.6	21.3	21.3	21.3
87.5°	18.0	8.9	8.9	7.9	7.9
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	12.52	14.05	12.89	14.36	14.67	8.48	10.01	8.85	10.32	10.63
	3H	14.29	15.65	14.67	15.98	16.34	9.75	11.11	10.13	11.44	11.80
	4H	14.96	16.24	15.36	16.58	16.96	10.25	11.53	10.65	11.88	12.26
	6H	15.44	16.63	15.86	16.99	17.39	10.63	11.81	11.04	12.18	12.57
	8H	15.61	16.74	16.04	17.13	17.53	10.76	11.88	11.18	12.27	12.67
	12H	15.71	16.79	16.14	17.17	17.60	10.84	11.92	11.27	12.30	12.73
4H	2H	12.63	13.91	13.03	14.26	14.64	9.18	10.46	9.58	10.81	11.19
	3H	14.56	15.62	14.97	16.02	16.43	10.62	11.69	11.03	12.09	12.49
	4H	15.31	16.27	15.74	16.68	17.12	11.22	12.18	11.65	12.59	13.03
	6H	15.90	16.73	16.36	17.18	17.64	11.71	12.54	12.17	12.99	13.44
	8H	16.12	16.89	16.58	17.34	17.81	11.87	12.65	12.34	13.09	13.56
	12H	16.27	16.96	16.75	17.44	17.91	11.99	12.68	12.47	13.16	13.63
8H	4H	15.33	16.11	15.80	16.56	17.02	11.58	12.35	12.04	12.80	13.26
	6H	15.97	16.61	16.47	17.11	17.58	12.16	12.81	12.66	13.30	13.77
	8H	16.22	16.80	16.74	17.31	17.80	12.38	12.96	12.90	13.47	13.96
	12H	16.43	16.94	16.94	17.43	17.99	12.56	13.07	13.07	13.57	14.13
12H	4H	15.32	16.01	15.80	16.49	16.96	11.62	12.31	12.10	12.79	13.26
	6H	15.95	16.53	16.47	17.04	17.53	12.23	12.80	12.74	13.31	13.80
	8H	16.24	16.75	16.75	17.24	17.80	12.50	13.01	13.01	13.50	14.07