

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: P930440

Luminaire Tested: DFN2DS-PN2F0-030DS840-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930440
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-PN2F0-030DS840-RLL
Description: 2 foot, Pentagon Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

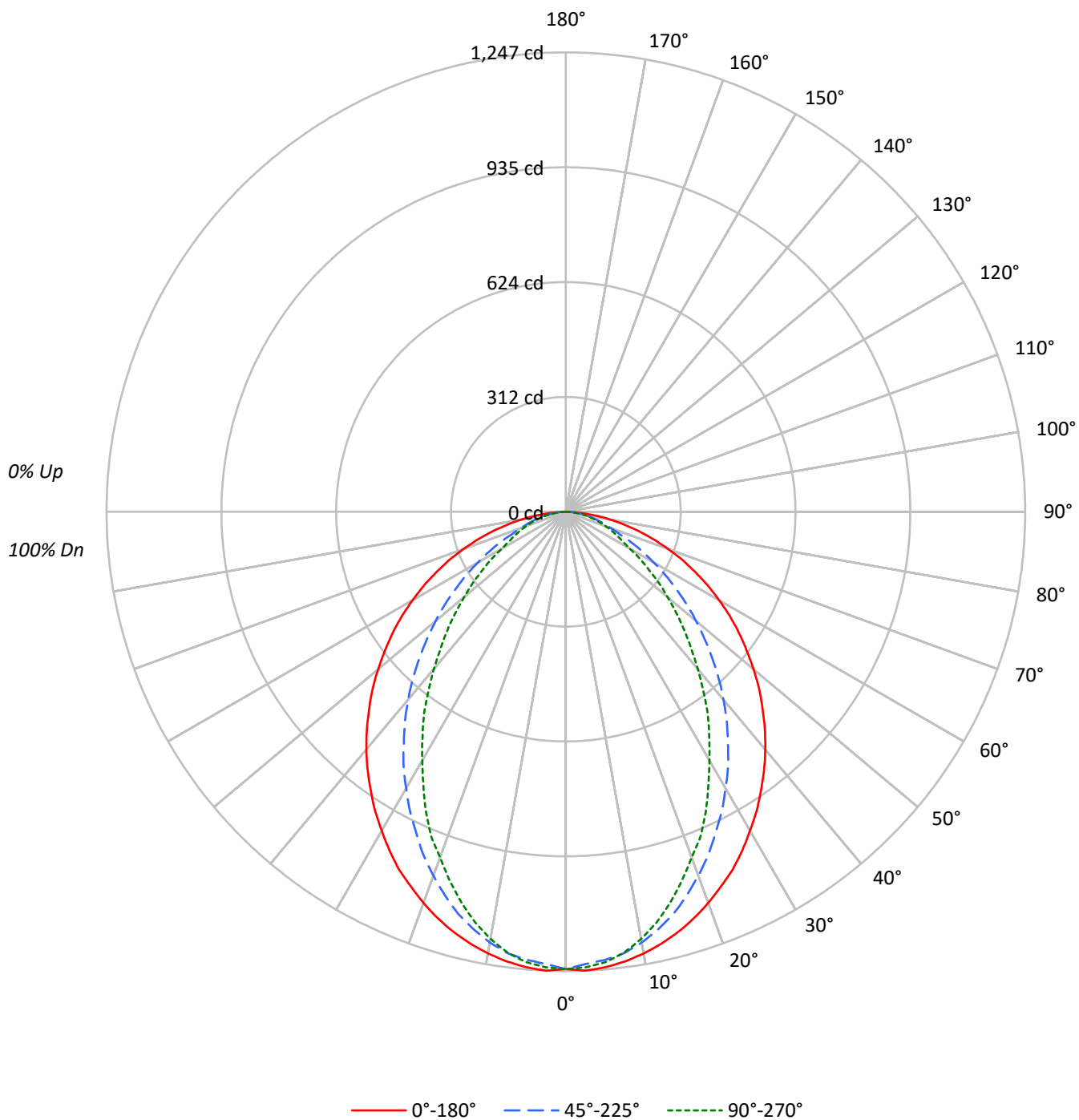
Lumens per Lamp: N/A
Luminaire Lumens: 2552.5 lumens
Efficiency: N/A
Efficacy: 82.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 2.29' x L: 2.17' x H: 0')
CIE Type: Direct

Input Watts (W): 30.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9972
Total Harmonic Distortion (THDi): 0.128
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°	2688	2688	2688
5°	2698	2654	2669
10°	2678	2611	2589
15°	2647	2534	2461
20°	2604	2423	2301
25°	2561	2298	2147
30°	2500	2169	1949
35°	2441	2029	1776
40°	2382	1883	1575
45°	2312	1720	1393
50°	2241	1556	1215
55°	2167	1378	1044
60°	2082	1192	866
65°	1986	1001	789
70°	1871	825	725
75°	1729	752	677
80°	1527	672	616
85°	1198	529	529

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2312 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	116.3	4.6
10°-20°	319.3	12.5
20°-30°	448.3	17.6
30°-40°	488.7	19.1
40°-50°	449.2	17.6
50°-60°	352.7	13.8
60°-70°	229.6	9.0
70°-80°	118.2	4.6
80°-90°	30.2	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°	884.0	34.6
0°-40°	1372.7	53.8
0°-60°	2174.6	85.2
0°-90°	2552.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2552.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1241	1241	1241	1241	1241	
5°	1241	1236	1221	1231	1228	118
15°	1180	1168	1130	1109	1097	333
25°	1072	1036	962	915	898	493
35°	923	866	767	696	672	578
45°	755	680	562	482	455	583
55°	574	486	365	298	276	513
65°	388	296	195	157	154	384
75°	207	128	90	82	81	219
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°	1241.1	1241.1	1241.1	1241.1	1241.1
2.5°	1246.7	1241.1	1228.7	1240.0	1237.8
5°	1241.1	1235.5	1220.9	1231.0	1227.6
7.5°	1231.0	1224.3	1208.6	1213.0	1207.4
10°	1217.5	1209.7	1187.3	1183.8	1177.2
12.5°	1200.7	1190.6	1160.3	1153.6	1141.1
15°	1180.5	1168.1	1129.9	1108.6	1097.4
17.5°	1156.9	1138.9	1091.7	1067.1	1049.0
20°	1129.9	1107.4	1051.3	1023.3	998.5
22.5°	1100.8	1074.9	1009.7	971.6	954.8
25°	1071.6	1035.5	961.5	915.4	898.5
27.5°	1036.7	998.5	916.5	863.8	837.8
30°	999.7	957.0	867.1	809.9	779.5
32.5°	963.7	912.0	820.0	752.6	724.4
35°	923.3	866.0	767.2	696.4	671.7
37.5°	884.0	822.1	717.7	640.1	612.2
40°	842.4	775.1	666.1	586.3	557.2
42.5°	799.7	727.9	614.4	531.2	503.2
45°	754.9	679.5	561.7	481.8	454.9
47.5°	712.1	632.4	511.1	431.2	406.6
50°	665.0	585.2	461.7	384.1	360.6
52.5°	618.8	534.6	414.5	340.3	319.0
55°	573.9	486.3	365.0	297.7	276.4
57.5°	527.9	438.0	321.3	258.4	240.3
60°	480.7	390.9	275.2	217.9	200.0
62.5°	434.7	344.8	235.8	182.0	173.1
65°	387.5	296.5	195.4	157.3	153.9
67.5°	342.6	251.6	157.3	138.1	134.7
70°	295.4	207.8	130.2	119.0	114.5
72.5°	250.5	167.3	108.9	100.0	97.7
75°	206.6	128.0	89.9	82.0	80.9
77.5°	162.9	90.9	70.8	66.3	64.0
80°	122.4	65.2	53.9	49.4	49.4
82.5°	85.3	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	14.67	16.19	15.03	16.50	16.82	10.63	12.15	11.00	12.47	12.78
	3H	16.44	17.80	16.81	18.13	18.49	11.90	13.26	12.27	13.59	13.95
	4H	17.10	18.38	17.50	18.73	19.11	12.40	13.68	12.80	14.03	14.41
	6H	17.59	18.77	18.00	19.14	19.53	12.78	13.96	13.19	14.33	14.72
	8H	17.76	18.88	18.18	19.27	19.67	12.90	14.03	13.33	14.42	14.82
	12H	17.86	18.94	18.29	19.32	19.75	12.98	14.06	13.41	14.44	14.87
4H	2H	14.77	16.05	15.17	16.40	16.78	11.33	12.61	11.73	12.96	13.33
	3H	16.71	17.77	17.12	18.17	18.57	12.77	13.83	13.18	14.23	14.63
	4H	17.46	18.41	17.89	18.83	19.27	13.37	14.32	13.80	14.74	15.18
	6H	18.05	18.88	18.51	19.32	19.78	13.86	14.69	14.31	15.13	15.59
	8H	18.26	19.04	18.73	19.48	19.95	14.02	14.80	14.48	15.24	15.71
	12H	18.42	19.11	18.90	19.59	20.06	14.14	14.83	14.62	15.31	15.78
8H	4H	17.48	18.26	17.94	18.70	19.17	13.72	14.50	14.19	14.94	15.41
	6H	18.12	18.76	18.62	19.25	19.73	14.31	14.95	14.81	15.44	15.92
	8H	18.37	18.95	18.88	19.45	19.94	14.53	15.11	15.04	15.62	16.10
	12H	18.57	19.08	19.08	19.57	20.14	14.71	15.22	15.22	15.71	16.28
12H	4H	17.47	18.16	17.95	18.64	19.11	13.77	14.46	14.25	14.94	15.41
	6H	18.10	18.68	18.61	19.19	19.67	14.37	14.95	14.89	15.46	15.95
	8H	18.38	18.89	18.89	19.39	19.95	14.65	15.16	15.15	15.65	16.21